

# Internal Revenue Service IT Modernization Vision & Strategy



October 2007

## **IRS Mission**

Provide America's taxpayers top quality service by helping them understand and meet their tax responsibilities and by applying the tax law with integrity and fairness to all.



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At the IRS, we envision a 21st century agency with the human capital and technology capabilities to effectively and efficiently collect the taxes owed with the least disruption and burden to taxpayers. This vision drives our efforts to modernize the IT infrastructure.

## Letter from the Deputy Commissioners

We are pleased to present the annual update of the IRS' Information Technology (IT) Modernization Vision & Strategy (MV&S), which defines the next steps in aligning our business priorities with our technology investments.

Since 2000, the IRS has steadily evolved our management processes and delivered modernized systems that have enhanced taxpayer service and improved our overall effectiveness as an organization. Over the past year, we have made additional strides in weaving an investment decision support process into the fabric of how we do business. This process is a reflection of a genuine partnership between the business and IT, where difficult decisions are made and trade-offs are based on an enterprise view.

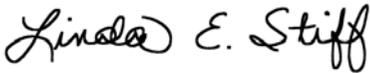
As a result, we are confident that this document, which was developed by a broad set of stakeholders representing all areas of the Service, will effectively guide our IT systems and operational decisions into the future. It establishes a sound strategic direction that will ensure we are well positioned as our business priorities shift and technologies evolve.

The MV&S is an important component of our IRS Strategic Plan. Three key strategic goals form the foundation of that plan: 1) improve taxpayer service; 2) enhance enforcement of the tax law; and 3) modernize the IRS through its people, processes and technology.

The IRS' core mission and ongoing challenge is to strike the right balance between providing high-quality taxpayer service and enforcing compliance with the nation's tax code.

This Modernization Vision & Strategy reflects a long-term program of change and a fundamentally different approach to our IT modernization effort. We are confident in the direction and investment decisions it sets forth.

Sincerely,



**Linda E. Stiff**

Deputy Commissioner for Services and  
Enforcement and Acting IRS Commissioner



**Richard A. Spires**

Deputy Commissioner for Operations Support

## Introduction

In the late 1990s, in response to the Restructuring and Reform Act of 1998 (RRA 98) and other mandates, the IRS revised its mission to:

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***Provide America's taxpayers top quality service by helping them understand and meet their tax responsibilities and by applying the tax law with integrity and fairness to all.***

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This mission statement describes not only the IRS' role, but also the public's expectations as to how this role should be performed. It also emphasizes a balance between service and enforcement, and is best articulated through the strategic operating equation for the IRS: "Service + Enforcement = Compliance."

The Modernization Vision & Strategy (MV&S) supports the fulfillment of the IRS' mission and strategic goals by establishing a five-year plan that drives information technology (IT) investment decisions based on priorities around modernizing front-line tax administration and supporting technical infrastructure. The MV&S leverages existing systems and new development to build IT capabilities, optimize capacity, manage program costs, and deliver business value on an incremental and frequent basis.

The IRS collects more than \$2 trillion in revenue every year through a voluntary compliance system where taxpayers are expected to report and pay their taxes on time. Ensuring taxpayers have the information and support they need to comply with their tax obligations requires a robust and reliable IT environment. Despite a relatively high rate of compliance, a significant proportion of taxpayers neither report nor pay their taxes. This shortfall is referred to as the Tax Gap. To address the Tax Gap, the MV&S defines technologies that help taxpayers meet their obligations while improving the identification and enforcement of non-compliance.

The IRS is heavily dependent on complex computer systems, some of which were designed over forty years ago. These systems have inherent limitations that significantly constrain our ability to achieve our mission. Furthermore, the employees who have the knowledge and skills to operate these systems are retiring or leaving the public service workforce. To be more responsive to changes in the tax law and to meet taxpayer expectations, it is critical for us to improve our technology and mature our supporting processes.

This document describes the continuum of change with the modernization of the front-line tax administration. The investment decisions reflect business and technical priorities for Fiscal Year (FY) 2007 and beyond.

## Drivers for IT Modernization

The IRS depends heavily on its IT systems to support its mission. However, the limitations of the existing computer systems and technical infrastructure have inhibited the Service's ability to make its business processes more responsive to its mission needs, to Congressional and Executive expectations, and to the desire of taxpayers for better service.

### Business Drivers:

Modernized IT systems are critical to the IRS' success in delivering on its business mission in the future. These business drivers include:

- Huge and continually growing volumes of work.
- Continued growth in the complexity of both the tax laws and taxpayer financial transactions.
- Expectations for continued improvement in services to assist taxpayers in meeting their tax obligations.

- The need to address the Tax Gap through improved services and more effective enforcement programs.
- The requirement for rapid response to changes in tax laws and evolving taxpayer behavior.

Meeting all of these needs without major increases in funding will require the IRS to become more efficient and effective in utilizing its resources. Modernized IT systems must play a major role in meeting these challenges.

The IRS and the Department of the Treasury recently published two documents which serve as strategic guides for the IRS' future business operations. *The Taxpayer Assistance Blueprint (TAB)* reports on IRS research to better understand the services most valued by taxpayers, as well as their preferences on the communication channels to receive those services. An essential part of the TAB strategy is the improvement of the technology that supports IRS customer services.

In *Reducing the Federal Tax Gap: A Report on Improving Voluntary Compliance*, the IRS and Treasury identified seven key strategies to address non-compliance. The report states that "continued improvement to technology...will provide the IRS with better tools to improve compliance through early detection, better case selection, and better case management."

### Technology Drivers:

In addition to the demands for new and improved business services, the need for IT modernization is driven by the IRS technology environment itself. Since IT services are a core part of meeting the IRS mission, it is essential to maintain and improve the technical performance and operational efficiency of existing systems and infrastructure. Major systems at the core of IRS tax administration were designed decades ago, when computing power was limited and expensive. The ability to maintain and change systems in response to new laws is inadequate by current standards because of the complexity and constraints of these systems.

- **Complexity of the Systems Environment:** The most important systems that maintain all taxpayer records, the Master Files, were developed in the 1960s. Each week, some records are extracted from these very large sequential files and placed on a separate online system, the Integrated Data Retrieval System (IDRS), which is used by most IRS Customer Service Representatives (CSRs) and many other front-line employees. IDRS was created in the early 1970s and provides functionality for querying and updating selected taxpayer accounts, along with basic case management and notice generation functionality. Account updates generated by IDRS must be sent to the Master Files for the weekly sequential posting.

#### Taxpayer Assistance Blueprint – Strategic Themes

1. Improve and expand education and awareness activities
2. Optimize the use of partner services
3. Elevate self-service options to meet taxpayer expectations
4. Improve and expand training and support tools to enhance assisted services
5. Develop short-term performance and long-term outcome goals and metrics

#### Tax Gap – Strategic Themes

1. Reduce opportunities for evasion
2. Make a multi-year commitment to research
3. Continue improvements in information technology
4. Improve compliance activities
5. Enhance taxpayer service
6. Reform and simplify the tax law
7. Coordinate with partners and stakeholders

The IRS created many other computer systems in the 1970s, 1980s, and 1990s to meet expanding business requirements and to provide workarounds to the limitations of the Master Files and IDRS. Dozens of specialized systems extract and feed data back and forth through the Master Files and IDRS. This weekly update process, along with the proliferation of departmental systems, results in a highly complex and sub-optimal IT environment. Modernization is necessary to simplify the environment, reduce operating costs, and position the IRS to respond to frequent changes in tax laws and business demands.

- **Outdated Infrastructure:** In addition to the application systems, all IRS employees are dependent on the delivery of base IT products and services to accomplish their jobs. These include applications hosting, data storage and distribution, local and wide area network services, and workstations. Constantly changing technology, the aging of infrastructure components, and the need to drive operational cost efficiencies demand that the IRS continue to invest in these areas as well.
- **Heightened Security Requirements:** Another major driver of our infrastructure investment is the need to protect IRS systems and data from unauthorized access and disclosure. The IRS has always taken a strong stance to protect the security of taxpayer and other data. However, new threats and a heightened state of alert require the Service to continue improving its ability to identify new threats and protect systems and data.

## The IT MV&S Process – A Program of Change

Since the inception of the Business Systems Modernization (BSM) program in 1999, substantial changes in the environment have forced the IRS to shift its thinking and original assumptions. In particular, the original goal to completely replace the existing IRS IT environment within 10-15 years has been deemed unrealistic given resource limitations.

The updated MV&S emphasizes a more targeted and agile replacement approach to IT systems. There is a renewed emphasis on leveraging legacy systems and deploying modernized systems on a more incremental basis. In addition, the MV&S is anchored by the following principles:

- Joint business and IT leadership and involvement throughout the process.
- Unified approach to setting strategic priorities and selecting investments as an integrated portfolio – not simply a collection of projects.
- Smaller, incremental releases delivered more frequently.
- Existing systems leveraged where appropriate.
- Collaborative business requirements and technical review by IT engineers, specialists, and business stakeholders at project inception.
- Application of a disciplined approach, to include solution concept and project estimation modeling, ensuring a full view of costs — including operations and maintenance support — associated with each investment.
- Efficiencies generated by focusing on operational streamlining, consolidation, and the retirement of systems.

The MV&S reflects the cumulative, total picture of the IT investment portfolio and the necessary organizational elements needed to meet this vision. As a long-term program of cultural change, the MV&S has taken an incremental approach to building commitment and advocacy throughout the business and IT organizations. What follows is a snapshot of the evolution of the MV&S.



**YEAR 1 (Fiscal Year 2005-2006):** The first year of the MV&S focused on the business priorities needed to enhance service and enforcement capabilities. Six Business Domains, which focused on primary tax administration functions, were defined and domain strategies were established. Each domain was asked to define business goals, opportunities (with emphasis on new functionality), and potential outcomes. Business Domains were defined by functional groupings that spanned across Business Operating Divisions (BOD). By forming domain workstreams, technology could be leveraged across organizations or services could be shared. The Business Domains included:

- Criminal Investigation
- Customer Service
- Filing & Payment Compliance
- Manage Taxpayer Accounts
- Submission Processing
- Reporting Compliance

Several Service Domains, which are the cross-cutting services necessary to support the Business Domains, were also introduced the first year. The Service Domains included Common Business Services (CBS), Data, Infrastructure, and Security. The initial year primarily focused on building the foundation to identify and address cross-domain services. As Year 2 approached, the Service Domains began to evolve into separately defined and governed domains.

Year 1 also introduced new investment decision support programs that included Solution Concept and Project Estimation services. By applying a more uniform, disciplined, and rigorous approach to the development of solution concepts and project estimates, investment decisions could then be based on more reliable and consistent data.

**YEAR 2 (Fiscal Year 2006-2007):** The second planning cycle of the MV&S focused on expanding the business scope to include Internal Management and Security and Privacy Domains. In addition, the Service Domains were further defined to address cross-cutting technical opportunities and to expand CBS, which identifies opportunities and leverages services that support multiple domains, and Data, which focuses on all aspects of data management. Lastly, Technical Domains were introduced and high-level strategies were formulated. The focus of the Technical Domains is the delivery of base products and services, such as end-user support, networks, and storage. The Technical Domains will become further established in Year 3. Below is a listing of the Technical Domains:

- Applications Development
- Enterprise Services
- Enterprise Operations
- Enterprise Networks
- End User Equipment & Services

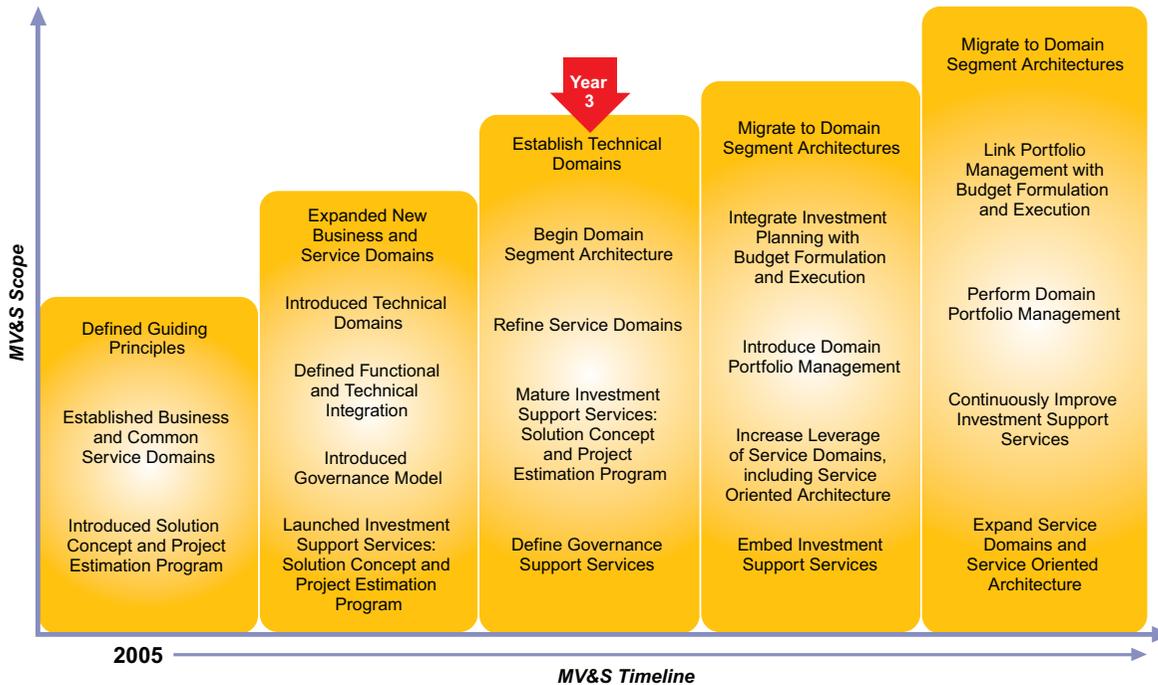
The Technical and Service Domains have not yet reached the same level of maturity that the Business Domains have achieved. The definition, goals, opportunities, and outcomes for each domain are included in this document; however, the potential projects and initiatives for the Technical and Service Domains are still under development and review.

Another important element of change was the establishment of investment decision support services that provided an increased confidence level and stakeholder engagement across both the business and IT organizations. The enabling processes centered on developing a well-defined business capability, designing a technical solution concept and estimating project life cycle, and defining operational and maintenance costs. These processes provide a consistent level of rigor and information for basing decisions on investment proposals, in-flight projects, and enhancements to existing systems.

During this time, domain-level executive governance committees were also established to oversee the end-to-end domain investment portfolio. The Domain Executive Steering Committees (ESCs) are chaired by both a business and an IT leader who share accountability over the domain strategy and associated project delivery.

Figure 1: The Five-Year MV&S Program of Change

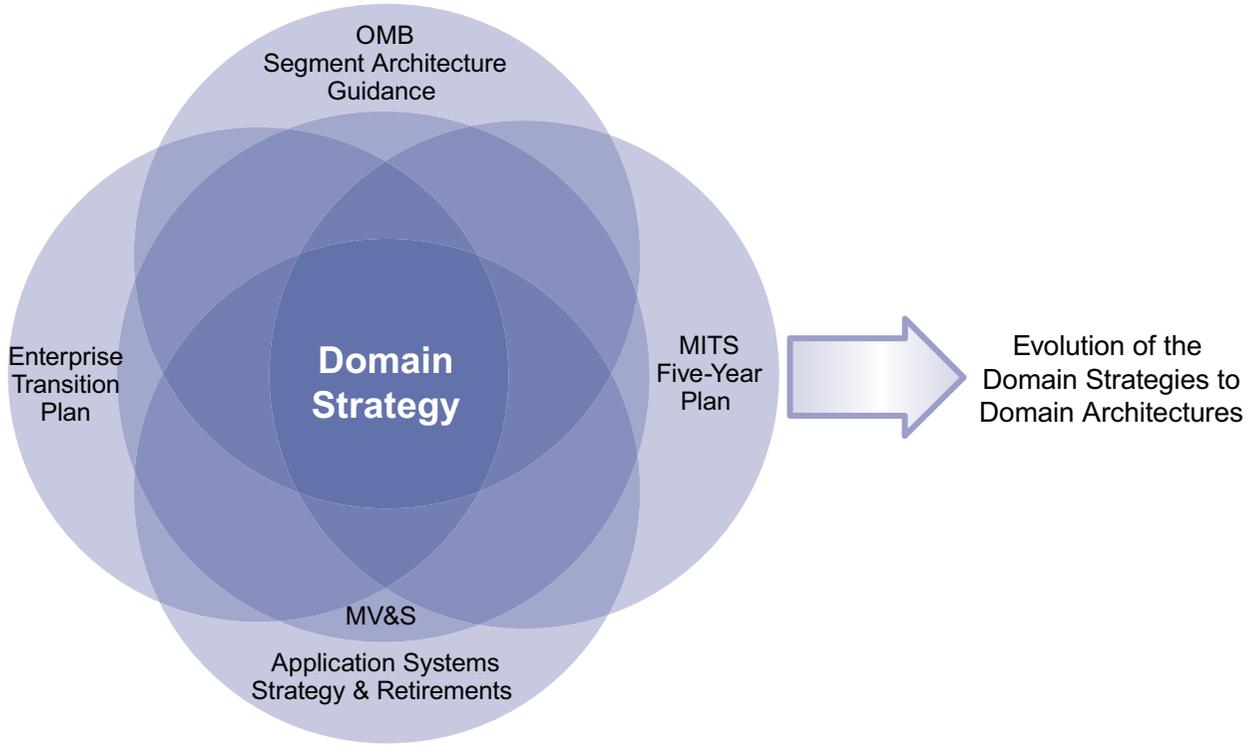
## MV&S - A Program of Change



**YEAR 3:** The MV&S is entering its third year, as shown in figure 1. As the MV&S planning process matures, the solution concept and project estimation processes will continue to improve. In addition, the scope of the MV&S will expand to embody all technology services and products delivered by the IRS. The Technical and Service Domains will propose potential projects and initiatives that will use the solution concept and project estimation services in order to ensure discipline, consistency, and uniformity across all IT investments.

New Business Domains, including functions that support tax administration — such as Taxpayer Advocate and Chief Counsel — will be added and will build upon the fundamental tenet of domain strategies driving investments. The IRS will begin developing domain architectures for each of the major tax administration business areas. The intent is to architect first and then determine where to invest. The domain architectures will take a more in-depth and comprehensive look at each business area, examining all fundamental business processes and systems. The architecture will provide a roadmap to reach the desired state and will logically link the business strategy with data, applications, technology, and organizational design. The domain architecture will also provide a framework for diagnosing, analyzing, and solving specific business issues that result from common architecture misalignments.

Figure 2: Domain Strategies — The Drivers for Planning and Investment Decisions

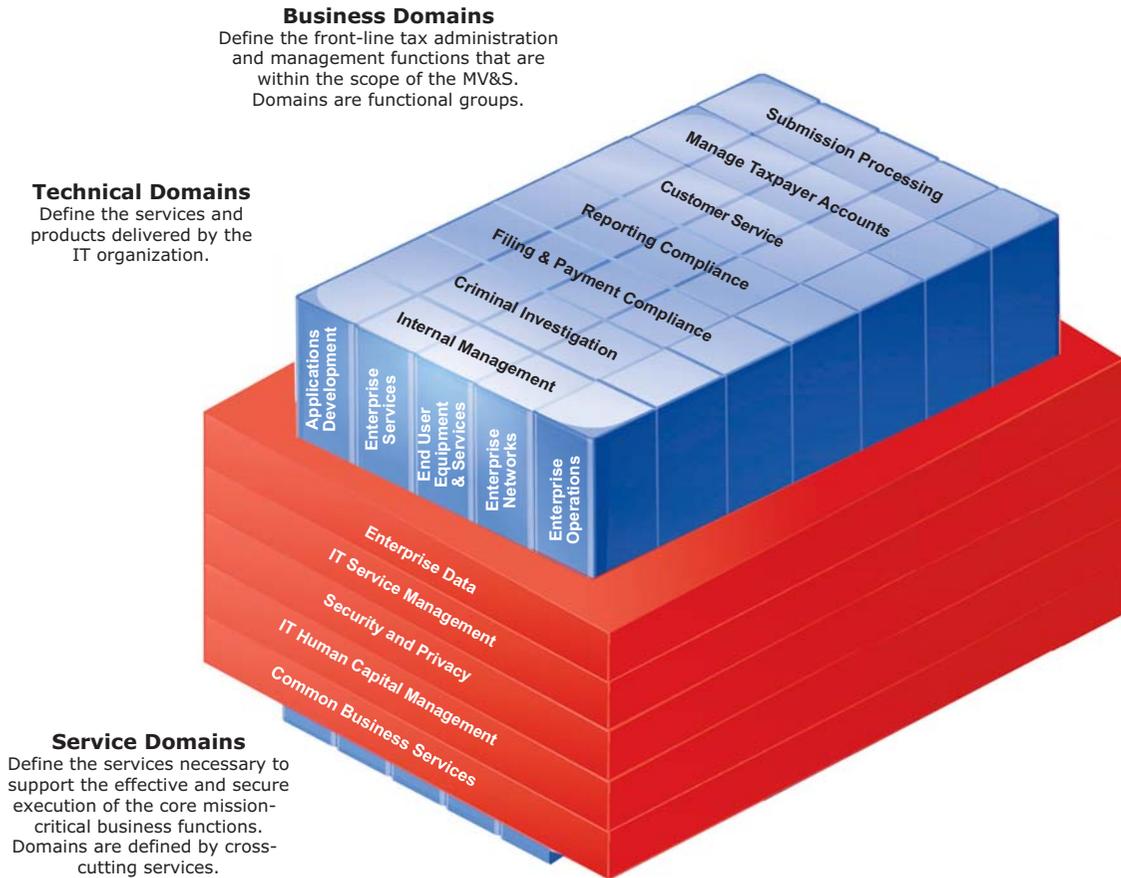


In the longer term, the MV&S will build out the domain architectures, improve the IT services and products, refine roles and responsibilities, and ultimately define a comprehensive IT investment portfolio that integrates budget formulation and execution.

## The MV&S Framework for IT

The MV&S Framework is made up of three sets of domains.

Figure 3: MV&S Domains



### Business Domains

The initial MV&S planning cycle focused on six primary Business Domains and began with a functional segmentation of the IRS. These domains reflect a purely functional, rather than organizational, view of the business. They are supported by services necessary for the effective and secure execution of the core mission-critical business functions. The Business Domain strategies have matured in the second planning cycle, as has the portfolio of potential projects and programs.

The basis of the initial MV&S began with a functional segmentation of the IRS. Core business functions that directly relate to front-line tax administration were constructed to form Business Domains. These domains have evolved over the last three cycles of the MV&S to represent increasing scope. For example, Internal Management was added in the most recent version, and the IRS has increased the alignment of technology investments with the required future business domain capabilities.

The seven current Business Domains are defined as:

Business Domain	Definition
Submission Processing	Includes the filing of both paper and electronic tax returns and the initial capture of tax revenues.
Manage Taxpayer Accounts	Includes the data, systems, and processes used to manage taxpayer accounts. This domain provides critical support to Submission Processing by providing return processing services to post and settle taxpayer accounts. It also supports the Customer Service, Reporting Compliance, and Criminal Investigation Business Domains by providing the ability to access and update the taxpayer account data necessary to investigate, respond to, and resolve taxpayer account refund and notice inquires.
Customer Service	Provides tax law and compliance assistance, taxpayer education, and tax payer account, refund, and notice inquiries.
Reporting Compliance	Consists of the examination components for Large and Mid-Size Business (LMSB), Small Business/Self-Employed (SB/SE), Tax Exempt and Government Entities (TEGE), and Wage and Investment (W&I). Applying strategies to field or correspondence examinations, the objective of the operating divisions is to strengthen compliance and address the Tax Gap. These activities seek to identify taxpayers who are not complying with reporting requirements that impact their tax liability or exempt status.
Filing & Payment Compliance	Includes the process for collecting delinquent tax obligations and securing delinquent tax returns. F&PC includes the investigation and collection of tax delinquencies (payment and filing) from large and complex businesses by Field Revenue Officers, as well as the resolution of simpler tax issues by CSRs & Tax Examiners in automated collection sites and campus operations across the country.
Criminal Investigation	Comprised of processes that enforce criminal statutes of the Internal Revenue Code and related statutes. Protects the American public from abusive schemes that erode tax and financial infrastructure, the ravages of narcotics, and internal and external terrorist threats.
Internal Management	Includes enterprise-wide administrative systems related to workforce support (time reporting and payroll), human capital (performance evaluation, position management, staffing, and personnel actions), administrative and custodial accounting (including financial reporting, financial statements, and associated audit), budget, strategic planning and performance measurement, procurement, facilities, and training.

## Technical Domains

The IT organization functions as a business delivering services and products to all divisions of the service, to other governmental agencies, and to the community of tax preparers. These functions are referred to as Technical Domains and are aligned with the current IT organizational structure. This document provides initial Technical Domain strategies; however, specific potential projects and programs to carry out those strategies will be identified in the next edition of the document, which will be delivered in Year 3.

The current five Technical Domains are defined as: *(refer to figure 3 on page 12)*

Technical Domain	Definition
Applications Development	Delivers integrated software solutions that address the objectives and priorities of the IRS.
Enterprise Services	Sets critical enterprise standards to promote compatibility and common practices across the IRS, applies engineering expertise directly to projects and programs, establishes frameworks for IT demand management and prioritization, and establishes governance and control methodologies for the IT portfolio.
End User Equipment & Services	Includes the provision and support of all user IT devices, such as desktop and laptop computers, local telephone systems, personal data assistants, printers, and cell phones. Serves as the single point of contact for customers to request IT products and services via telephone, web, and e-mail.
Enterprise Networks	Includes local and wide area network and data transmission services.
Enterprise Operations	Manages the operation of the mainframe and server environment for the IRS.

## Service Domains

These are the cross-cutting services that can be leveraged across both the Technical and Business Domains. Some Service Domains are further along in executing their strategy than others. A description of each Service Domain, along with goals and longer-term opportunities, is provided in this document.

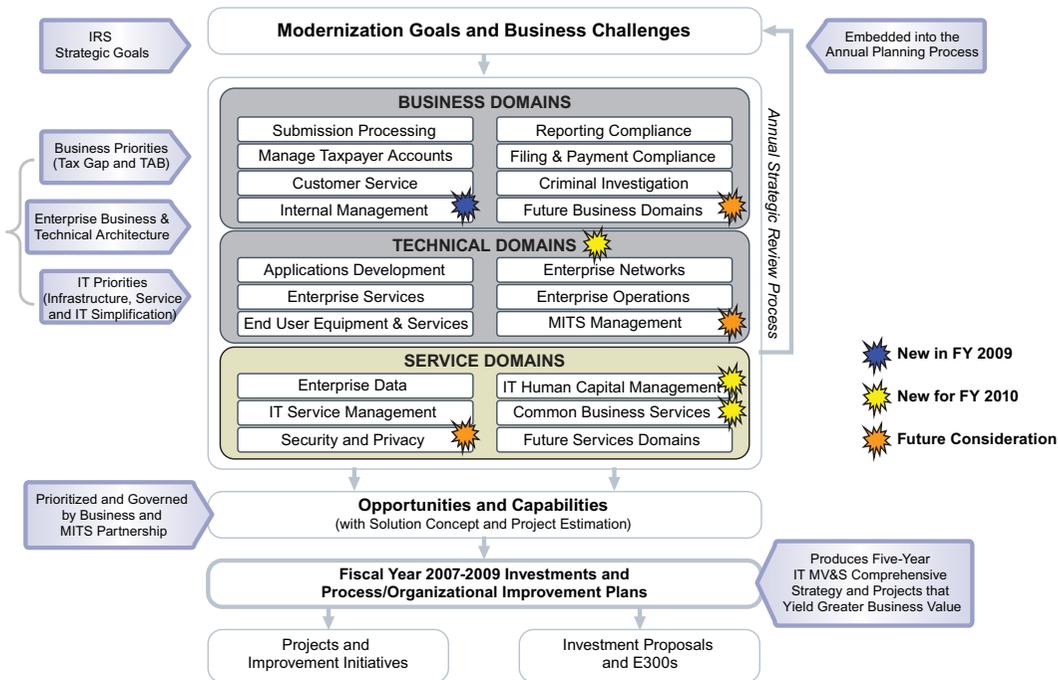
The current five Service Domains are defined as: *(refer to figure 3 on page 12)*

Service Domain	Definition
Enterprise Data	Provides guidance on all aspects of data management, including collection, consolidation, certification, connection, and consumption.
IT Service Management	Manages enterprise IT systems. Focuses on improving the way IT services are delivered and supported across the IRS.
Security and Privacy	Supports the IRS tax administration processes by ensuring taxpayer privacy and protecting taxpayer information and associated systems.
IT Human Capital Management	Provides support to management on key human capital decisions, including organizational change and transition planning, recruitment and hiring, succession planning, performance management, workforce planning, employee and labor management, and education and training to support effective employee development.
Common Business Services	Supports rapid, cost-effective delivery of similar business functionality within and across business domains. Scope includes identification of business services, software or IT services, software components, or Commercial Off-the-Shelf (COTS) products.

For all domains, a five-year strategy has been developed and is based on business and IT priorities. The business priorities also emphasize the initiatives outlined in the comprehensive Tax Gap and Taxpayer Assistance Blueprint strategies. For the Technical Domains, other considerations were taken into account, such as process efficiencies, IT simplification or retirement, and resource capacity. From there, opportunities have been defined that will yield the greatest benefit to taxpayers and to the IRS. Figure 4 on the following page illustrates the cascading relationship between the IRS strategic direction and the priorities defined by the MV&S.

Figure 4: MV&S Framework for IT

## MV&S Framework



Subsequent pages of this document will focus on each of the Business, Technical, and Services Domain strategies and potential project or proposal investments.

## Looking Ahead

The IRS has made significant progress institutionalizing the MV&S planning discipline and investment support processes. On a broader perspective, the MV&S has provided the link between strategic planning, enterprise planning, and investment planning. As a result, each year the scope has expanded, the processes have become more defined, and the expectations for achievement have grown.

On an ongoing basis, we will leverage lessons learned from the previous cycle, broadening the net of communications and stakeholder involvement, and ultimately improving the IT services and the management of an enterprise-wide IT portfolio. Among the lessons from this past year were:

- The value of engagement and partnership between the business and IT executives in providing guidance and governance to the overall process and portfolio selection.
- The criticality of a distinct and agreed upon domain strategy that is based on both business and IT priorities to drive investment decisions.
- The importance of well-defined and communicated investment support processes.
- The availability of engineering and business subject experts in validating the business capabilities, the solution concept design, and the project cost estimation.
- The recognition that the MV&S is a long-term program of change that will evolve as skills are built, lessons are applied, and behavioral changes are embedded into the way we do business.



As the IRS moves into its next MV&S planning cycle, these lessons will be applied. The Agency will focus on improving the process in the following areas:

- **Service Oriented Architecture (SOA)** – SOA is a design approach providing common services that leverage existing and new functionality by combining capabilities, such as Address of Record, in new ways. Initially, the focus is on building out Infrastructure and Application Services and will eventually advance to an enterprise business service as the processes mature and services are adopted.
- **Domain Architecture** – Domain architecture is a business-driven methodology to define a roadmap from a current to a future state. It is also an integrated, structured approach that logically links strategy and performance, data, applications, and technology. The goal is to build the architecture for each Business Domain. Currently, an effort is underway to pilot and fully build out the F&PC domain architecture to serve as the model for the other Business Domains.
- **Budget Formulation/Execution Alignment** – The focus of this initiative is to extend the concepts introduced in the MV&S to provide a multi-year view of the entire IT budget, defining a strategic approach to the allocation of resources and a detailed picture of how they will be assigned in the future. Over the next year, we will refine the alignment between the planning and budget formulation processes while capturing and analyzing detailed budget data for the current year and beyond.
- **Governance and Portfolio Management** – Each year, the governance model takes further shape and becomes more embedded into the investment planning process. The Modernization and Information Technology Services (MITS) Enterprise Governance (MEG) Committee still remains the primary decision-making entity and provides strategic guidance. It is a permanently chartered executive committee that fully engages both the business and IT executives. The domain-specific ESCs, which stood up in Year 2, are the owners of the domain strategy and IT portfolio. The ESCs are co-chaired by both a business and IT executive and will continue to mature their ability to effectively perform portfolio management.
- **Investment Support Services** – The IRS will continue to improve and mature processes for business capabilities definition, solution concept development, and cost estimation services. As the MV&S progresses and demand for services increases further, the IRS will refine services and products to accommodate a high volume and different types of work requests. Cost estimation processes will improve through the use of enhanced tools and the development of IRS-based cost parametrics for IT functional and infrastructure initiatives for life cycle estimates of scope, cost, effort, schedule, staffing, and quality. Ultimately, a primary focus will be to use a data repository that will enable the IRS to refine parametric estimating models and assess and track estimates and actual costs over time.

## **Business Domains**

The core business functions that directly relate to front-line tax administration.

## Business Domains

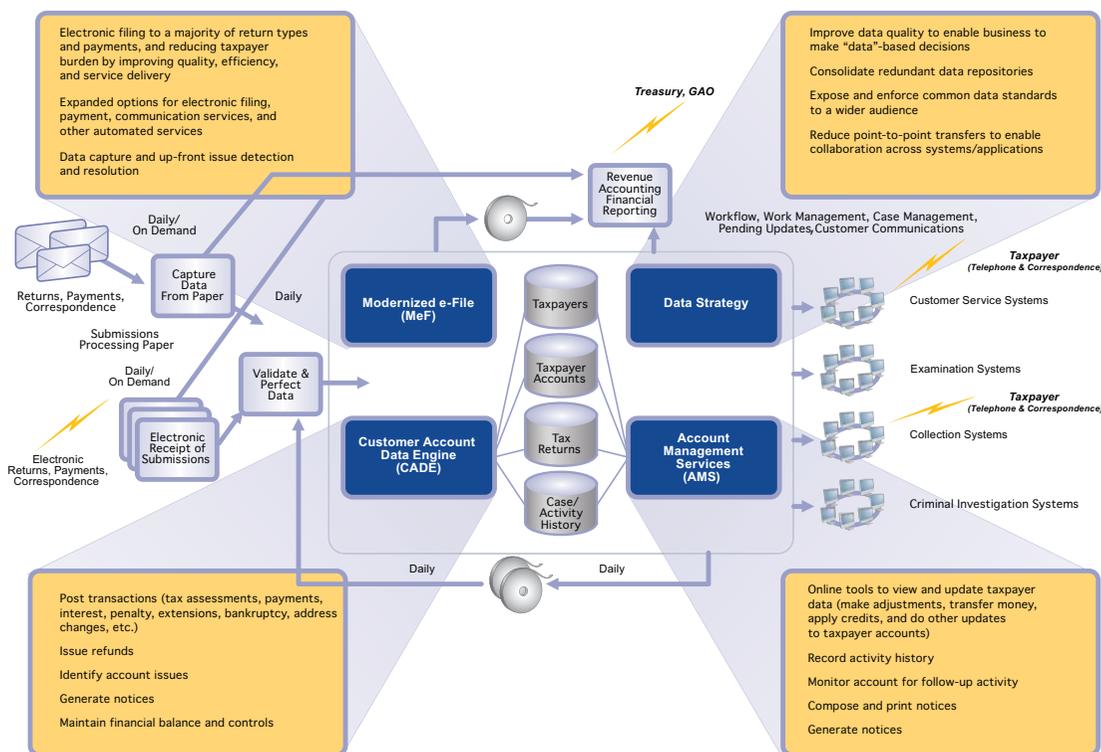
The Business Domains represent a functional view of the IRS, and in many instances, cut across organizational lines. In this planning cycle, the focus was on six primary tax administration domains, along with the Internal Management systems necessary to support the efficient and effective operation of the IRS as an organization.

At the heart of tax administration are the systems the IRS uses to receive, process, analyze, and distribute data that is related to taxpayer account status and activity. As described in the domain strategies below, some of the key systems that support these processes are up to forty years old, involving flat, sequential files, and weekly batch processing. This paradigm results in significant limitations in the capabilities that the IRS can deliver to its employees and customers. In addition, it results in a very costly and cumbersome system that has difficulty adapting to rapid changes that exist in our environment.

The figure below illustrates how the three projects at the heart of the Business Systems Modernization (BSM) program — Modernized Electronic Filing (MeF), the Customer Account Data Engine (CADE), and Accounts Management Services (AMS) — along with a comprehensive strategy for data collection, consolidation, storage, and distribution are at the very foundation of the Service’s overall modernization strategy. Achievement of these four “pillars of modernization” is essential to the support of all tax administration activities and absolutely critical to the long-term success of the modernization program.

Figure 5: Four Pillars of Modernization

## Four Pillars of Modernization: e-File, CADE, Account Management Services, and Data Strategy



## Submission Processing

### Definition

The Submission Processing Business Domain, which includes the filing of both paper and electronic tax returns and the initial capture of tax revenues, plays an important role in both service and enforcement. As the first contact point for most taxpayers, public perceptions about service — especially the degree of burden taxpayers face to meet their tax obligations — are established. From an enforcement standpoint, data capture and up-front issue detection and resolution contribute to the effective tax law enforcement.

### Opportunities

There are several redesign opportunities being pursued to achieve Submission Processing’s goals:

#### Goals:

- Expand electronic filing to a majority of return types and payments
- Develop systems for processing residual paper returns and payments in a manner consistent with electronic returns

#### Benefits:

- Simplify the tax return filing and payment experience for all classes of taxpayers
- Reduce taxpayer burden by improving quality, efficiency, and service delivery
- Expand options for electronic filing, payment, communication services, and other automated services

Opportunity	Expected Business Outcomes
Electronic Filing – Expand Filing Options	Options for electronic filing will include a majority of return types and forms. Problems will be immediately identified and will allow practitioners to correct individual returns online.
Remittance Processing – Optimize Electronic Payment Options	Payment options for all taxpayers, including international, will be expanded and new service options will be introduced.
Remittance Processing – Convert Paper Remittances at Point of Receipt	The IRS and Federal Reserve Bank will receive electronic data and will be able to view payment data and images online.
Return Processing – Upfront Issue Detection and Resolution	Issues will be systematically identified, managed, and resolved at the earliest point in the processing stream. Cases will be created automatically for issues that cannot be resolved systematically. Validations occur in real-time to minimize redundant checks and rework.
Return Processing – Return Validation and Computation	Centralized and systemic return validation and tax computations will be conducted as early in the process as possible, eliminating unnecessary redundancy and allowing for faster processing of returns and issuing of refunds.
Return Processing – Entity Management	A single, authoritative source to facilitate viewing and managing entity data will ensure consistency and accuracy and eliminate multiple processing.
Return Processing – Convert Paper Returns to the Point of Receipt	Electronic data will be available for downstream activities, including use within the Customer Service, Reporting Compliance, Filing & Payment Compliance, and Criminal Investigation domains.

## Potential Future Projects and Programs – Submission Processing

### Modernized e-File (MeF) Program

The MeF program has developed a web-based platform for filing tax and information returns electronically via registered Electronic Return Originators (ERO). This system uses a browser-based and application-to-application solution to provide ERO end users with improved functionality over the legacy e-file system. MeF supports the IRS regulations that require large corporations and tax-exempt organizations at a specific asset threshold to electronically file their tax returns or annual information returns as of January 2006.

### Excise Tax e-File and Compliance (ETEC)

ETEC supports the compliance of highway use and fuel excise tax mandated by the American Jobs Creation Act of 2004 (Public Law 108-357) and the SAFETEA-LU Act (Public Law 109-59). ETEC is funded by the Department of Transportation.

### IRS Employee Retirement Income Security Act (ERISA) Residual Solution (IERS)

IERS explores multi-Agency alternatives to unbundle and possibly eliminate certain Form 5500 schedules for IRS and SSA-specific data.

### Modified Exempt Organizations/Employee Plans (EO/EP) Determination System (MEDS)

MEDS builds on the existing infrastructure to provide additional data storage and retrieval of historical records, business rules, and electronic user fee payments and to provide processing capability for electronic applications received from the (TEGE) Application e-Services project.

### Remittance Strategy

Remittance Strategy will allow rapidly emerging industry standards (i.e., paper check conversion and check truncation) for remittance processing and will enable the IRS to drive remittance processing volume toward efficient and cost-effective electronic payment methods. The paper remittances will be converted to electronic transactions at the IRS field locations, which will eliminate the need to manually transport and process paper checks.

### Service Center Recognition Image Processing System (SCRIPS) Image Retrieval System (SIRS)

SIRS will build an image retrieval system for forms processed using SCRIPS. These forms include FTDs, IRP documents, K-1s, 940, and 941 SIRS. Employees with the appropriate permission will be able to pull SCRIPS images remotely.

## Manage Taxpayer Accounts

### Definition

The Manage Taxpayer Accounts Business Domain includes the data, systems, and processes used to manage taxpayer accounts. This domain provides critical support to Submission Processing by providing return processing services to post and settle taxpayer accounts. It also supports the Customer Service, Reporting Compliance, and Criminal Investigation domains by providing the ability to access and update the taxpayer account data necessary to investigate, respond to, and resolve taxpayer account refund and notice inquiries.

### Opportunities

The commitment to pursue improvement opportunities within this domain is critical to the success of all IRS programs and serves as key enablers for many of the goals and objectives of the IRS. The opportunities for this domain to increase access to authoritative and timely account data are:

#### Goals:

- Standardized taxpayer account issue and case management processes
- Provide on-demand access and the ability to update taxpayer account information in a single, authoritative data store

#### Benefits:

- Authorized users can view and update taxpayer accounts on-demand from a common interface
- The MITS organization will operate with agility when responding to new business requirements by using an SOA — allowing for reuse of services that deliver functionality faster and more efficiently with less complexity and with fewer one-of-a-kind interfaces
- Customer Service’s goals for accurate, timely, and accessible data for taxpayers and IRS employees will be achieved
- Submission Processing’s goals for faster, more agile services will be achieved with lower processing costs

Opportunity	Expected Business Outcomes
Provide immediate access to integrated account data	CSRs and other authorized users will use common interfaces and web-based applications to gain immediate access and viewing capabilities for all pertinent taxpayer account information, regardless of where the data resides. This common environment will improve their ability to resolve account inquiries with minimal taxpayer interactions and will facilitate the taxpayer’s ability to self-assist or self-correct.
Update taxpayer accounts on-demand and settle accounts daily	Taxpayer accounts are updated and settled daily with all transactions from IRS campuses. Taxpayer accounts can be updated on-demand using transactional data and will trigger immediate updates to the account history. When changes to an account are made, systemic alerts are generated and received by IRS employees. This provides access to timely account information to facilitate the resolution of issues or response to an inquiry.
Online account creation and maintenance	Customers can establish access to their account online. Account diagnostics will assess account status, determine necessary actions, and trigger systemic generation of notices or letters based on selected treatment stream(s).

Opportunity	Expected Business Outcomes
Manage more accounts using the modernized platform (CADE)	Building on the current infrastructure, the modernized platform will process more account types with increased business functionality. The modernized platform will accept validated returns and computations and perform complete refund processing. It will also process schedules for Single, Head of Household, and Married, name changes, and split refunds, and will conduct cross-relationship checking. The modernized platform will also expand its 1040 processing capabilities.

Managing taxpayer accounts in the current IT environment presents significant challenges. CSRs work with outdated technologies and business processes that impede productivity and prevent access to comprehensive, timely information. Updates to the Individual Master Files (IMF) are by weekly batch runs. The Integrated Data Retrieval System (IDRS) was first designed and implemented in the 1970s and later enhanced in 1985. Data entry and retrieval is by code, not business English; lack of familiarity with the codes promotes employee errors. IDRS applications tend to be single function; employees must execute a series of applications to research issues and send transactions to update the Master Files. It takes IRS employees an excessive amount of time to master the system, resulting in increased workloads created by repeat callers, duplicate correspondence, and erroneous notices sent to customers.

The future vision for the Manage Taxpayer Account domain includes operating models that address these deficiencies with a combination of changes to organization, processes, and technologies. To provide world-class service, CSRs must be equipped with the tools to access information quickly and accurately in response to complex customer inquiries. Individual assistance will provide this capability from a desktop information system that will enable CSRs to:

- Gather information using new customer relationship management concepts.
- Respond quickly and accurately to customer inquiries.
- Access and update comprehensive, up-to-date account information.
- Use workflow management tools and processes, automatically inform relevant parties throughout the organization of actions taken on a particular customer's account, and manage outstanding cases for follow-up work or to identify the status of a customer inquiry.
- Improve Notice Services by retaining accounts in CADE through notice generation, improve notice editing capabilities, use customer information proactively, and customize each customer interaction.

CADE and AMS are the foundational systems that will eventually replace the IMF and IDRS as shown below:

A very significant change in this domain is the establishment of Account Management Services (AMS) as a major new modernization program. The CADE project is moving more complex taxpayer accounts, including accounts with issues, off the IMF and into a modernized database. To keep these accounts in CADE, the functionality required to manage taxpayer accounts — which is embedded in current systems such as IDRS — must be modernized. Projects in the AMS program will build the applications and databases that enable IRS employees to use the data in CADE to facilitate faster, more accurate issue resolution. These new capabilities will bring value to those taxpayers that reside in the CADE database. AMS will also establish the foundation for major compliance programs by providing the applications that monitor taxpayer accounts and send notices.

## **Potential Future Projects and Programs – Manage Taxpayer Accounts**

### **Customer Account Data Engine (CADE)**

CADE represents the most essential, yet one of the most difficult aspects, of the entire modernization effort. CADE supports daily posting, settlement, maintenance, refunds processing, and issue detection for taxpayer accounts and return data. It will also enable the development of subsequent modernized “back-end” systems, which will allow online data posting in addition to daily batch processing. The strategy for building CADE is to use subsets of taxpayer accounts, beginning with accounts with no open issues, and add population complexity and increased functionality with successive system releases. Eventually, CADE will house tax information for more than 200 million individual and business taxpayers and process returns with increased speed. This release strategy enables CADE to be deployed in an incremental manner, which controls scope and mitigates risk.

### **Account Management Services (AMS)**

AMS releases will provide functional components synchronized with the CADE development schedule. Several components are coupled with CADE releases to create an Integrated Customer Account Management (ICAM) solution. Other AMS components, such as those related to the Correspondence Imaging System (CIS) and document inventory conversions, will be delivered independent of the CADE schedule.

### **ICAM/User Interface**

User Interface provides a common integrated view for updating taxpayer data (i.e., make adjustments, transfer money, apply credits), and includes the development of all AMS broker-based services and migration to the Employee User Portal (EUP).

### **ICAM/Case Processing and Document Inventory Management**

Case Processing and Document Inventory Management will use an enterprise architecture-compliant solution for case processing, business process management, and document inventory management, and includes the conversion and migration of existing document inventories as well as the addition of new inventories.

### **ICAM/Activity History**

Activity History will provide a case history database, including the addition of CADE account status information, with broker service-enabled user access.

### **Notice Services/Composition and Print Service**

The Notice Services component will provide a single notice composition and print solution for accounts on CADE and the Master Files.

### **Notice Services/Notice Review**

Notice Review will provide the capability to review notices associated with modernized accounts prior to them leaving the Service.

### **Account Monitor**

Account Monitor will provide the functionality to monitor the status, activity, and balance due on taxpayer accounts and automatically trigger follow-up actions, such as sending out a notice or assigning a case. This functionality is required for CADE Release 5 and beyond.

## Customer Service

### Definition

The Customer Service Business Domain provides tax law and compliance assistance, taxpayer education, and taxpayer account, refund, and notice inquiries. Customer Service assistance is provided through three primary means: Centralized Contact Centers (for phone, written, and electronic inquiries), Self-service Applications (via the phone and web), and Field Assistance (for walk-in assistance).

### Opportunities

The opportunities being pursued to deliver new and improved multi-channel contact capabilities for assisted help and self-service, as well as improved decision support tools, are:

#### Goals:

- Expand its electronic service capabilities to the tax professional community
- Implement new capabilities targeted directly at the individual taxpayer
- Redirect customer service resources to work complex inquiries requiring one-on-one contact with taxpayers

#### Benefits:

- Reduce the taxpayer burden, thereby enabling greater voluntary compliance
- Provide improved service levels, customer satisfaction, employee satisfaction, and cost savings through enhanced delivery
- Enable more effective workload distribution, efficient use of staff, and overall CSR productivity

Opportunity	Expected Business Outcomes
Multi-Channel Contact (for CSR-Assisted Help) – Expand and integrate the communication channels used by the IRS Contact Center and Field Assistance	In the multi-channel environment, the system will provide automatic authentication for customers while their account data is retrieved for simultaneous presentation to the IRS employee handling the inquiry. Calls will be held in a central queue and routed to the next available agent regardless of location. Workload will be balanced and monitored between contact channels and media.
Self-service Applications (without CSR assistance) – Increase taxpayers’ ability to self-assist and self-correct	Taxpayers will have additional self-service applications available to them via the telephone and the Internet. Natural language search capabilities will reduce the burden of navigating the options within the automated self-service telephone applications.
Self-service Applications (without CSR assistance) – Increase tax professionals ability to self-assist and self-correct	Reporting agents access e-Service products that meet their level of authorized access to taxpayer information.
Self-service Applications (without CSR assistance) – Increase self-service capabilities for Tax Exempt and Government Entities	Customers may establish installment agreements and make payments electronically, and agree to an Offer in Compromise electronically, using rules-based decision support.
Enable effective and fast decision making with decision support tools	Automated rules-based tools will be used to research taxpayer issues and answer tax law questions. Complex research tasks will be automated to facilitate repeated use. Rules-based and natural language search technology and internal and public portals will be used to manage and access disparate databases of institutional knowledge. Data warehouses will be developed to facilitate data analysis and extraction without risk of interrupting normal business processing. A common desktop application will be used to capture and manage all taxpayer inquiries.

## Potential Future Projects and Programs – Customer Service

### Centralized Contact Center Forecasting and Scheduling (CCCFS)

CCCFS uses historic workload and productivity data, in conjunction with contact center site staffing profiles, and user-defined parameters to forecast customer contact workload. It determines half-hourly staffing schedules by contact type (phone, correspondence, e-mail) and tracks performance against forecast and schedule.

### Contact Recording (CR) – Release 4

CR provides an important tool for reviewing quality and accuracy of taxpayer accounts. The system enables specific feedback to front-line assistors to assist them in improving their interactions and allows for targeted training for issues where individual assistors may be having difficulty, resulting in greater accuracy and an improved experience for the taxpayer. CR is designed to improve quality and performance feedback by enabling the IRS to record voice conversations and computer activity during customer contacts — a standard practice in private industry — for review by authorized personnel. Release 4 is for the Taxpayer Assistance Center (TAC) offices.

### Correspondence Imaging System (CIS) – Release 2

CIS provides CSRs and Tax Examiners (TE) in the W&I Accounts Management campus locations with access to correspondence that has been imaged. Release 2.0 covers the five campuses that were formerly under the SB/SE organization.

### End-to-End Publishing (E2EP)

E2EP will use the IRS enterprise architecture standard document management system, Documentum, to provide fully integrated technology solutions, extending the Virtual Translation Office implemented in Release 1A. Release 1B will support and streamline E2EP business processes within Media and Publications' publishing and distribution functions.

### Enterprise Queue

Callers are queued at a virtual, central point and distributed to individual sites as resources become available, thus improving the customer experience. Implemented in Q1 of FY 2007, Enterprise Queue also enables callers to hear their approximate wait time.

### Internet Customer Account Services (I-CAS)

I-CAS enables taxpayers to securely view account information via the Internet and provides tools for self-service and self-correct assistance. Taxpayers can view entity, account, and return information; change address; determine a payoff amount; file a Form 4868 (extension of time to file); and complete and sign Form 2848 (disclosure authorization).

### Queuing Management System (QMS) FAMIS

QMS enables the IRS to optimize customer flow and improve customer service at TAC. It accurately determines taxpayer traffic by capturing data on taxpayer arrival times, the types of service requested, wait times, and more defined reasons for the contact. It will also allow management to roll up customer service data to the group, territory, area, and national level, providing more accurate reports for data-driven decisions.

### Reporting Agents (RA) Access to e-Services

This feature reduces the IRS' and RA's paperwork burden by delivering transcripts and other correspondence via the Internet.

## Tax Exempt and Government Entities (TEGE) Application e-Services

TEGE, in collaboration with e-Forms and third parties, will provide enhanced functionality to support electronic filing of Exempt Organizations (EO) and Employee Plans (EP) determination applications, including electronic user fees, personal identification number (PIN) and electronic signature options, and binary attachments of schedules, attachments, and other supporting documentation.

## Reporting Compliance

### Definition

The Reporting Compliance Business Domain consists of the examination components for the four major business units of the IRS (LMSB, SB/SE, TEGE, and W&I), which focus on strengthening compliance and addressing the Tax Gap. These activities seek to identify taxpayers who are not complying with reporting requirements that impact their tax liability or exempt status. The objective of the examination activity is to ensure that the proper amount of tax is reported and paid. This includes verifying return accuracy and establishing that the correct income is reported and that deductions meet Internal Revenue Code requirements. This new direction focuses on several priority areas, including:

- Promotion and use of abusive tax schemes and avoidance transactions.
- The misuse of offshore transactions.
- The non-filing and underreporting of income by higher income individuals.
- Flow-through income.

### Opportunities

The redesign opportunities for Reporting Compliance are:

#### Goals:

- Identify, address, and prevent abusive tax schemes
- Discourage and deter noncompliance, with emphasis on corrosive activity by corporations, high-income individuals, and other contributors
- Detect and deter domestic and offshore-based tax and financial criminal activity
- Deter abuse within tax exempt and government entities and the misuse of such entities by third parties for tax avoidance or other unintended purposes
- Increase the number of taxpayers covered through pre-filing programs
- Increase examination coverage
- Reduce examination cycle time (from issue identification to resolution of examination)
- Provide a work environment that ensures quality and professionalism to enforcement organizations, employees, and taxpayers

#### Benefits:

- Improve the timely detection and deterrence of non-compliant transactions
- Increase resource productivity
- Improve quality of service
- Strengthen enforcement activities
- Improve quality of examinations by reducing errors
- Increase ability to capture and manage intellectual capital of departing employees

Opportunity	Expected Business Outcomes
Enhance planning tools to provide an integrated approach to the development of the Exam Plan	The IRS can use data from numerous sources to forecast workload, project staffing, and training requirements, centrally control inventory selection and delivery, and fully integrate the workload planning process to maximize workforce effectiveness.

Opportunity	Expected Business Outcomes
Proactively detect and respond to issues and assign cases to the most appropriate treatment stream	Systems will use data from tax returns, historical data, and other information to better identify and select cases and manage tax issues across multiple entities. Automated business rules will determine the most appropriate treatment approach to address specific compliance issues and assign work based on the capacity in each treatment function. High-risk cases are prioritized according to pre-determined criteria.
Leverage technology to enhance processes and provide better resource workload management	Front-line Reporting Compliance employees have the tools necessary to better manage their inventories, provide a fully electronic virtual case folder, allow electronic collaboration among employees in remote locations, and streamline the work process of individual examiners.
Capitalize on technological advances and utilize data to work cases more effectively	Modern technology will reduce the need for redundant data input by front-line examiners by systematically moving data from existing sources, providing access as needed to full customer account information and case files.

## Potential Future Projects and Programs – Reporting Compliance

### Content Management and Collaboration (CMC)

CMC will enable remote access to documents, reports, and training materials that are located in document management repositories or on web sites. It will include a web-based capability that integrates document management, forums (message boards), calendars, instant messaging, and other interpersonal communication and productivity tools to enhance secure communications among team members on large audit sites.

### Correspondence Examination Automated System (CEAS)

CEAS enables the examination of over one million tax returns per year via correspondence. It will provide the first phases of unattended batch processing for correspondence examinations as well as inventory management for SB/SE and W&I campus operations. It will integrate with a case management system for assignment directly to examiners.

### Examination Desktop Support System (EDSS)

EDSS will provide for an integrated system to receive tax returns electronically for examination. It includes audit workpapers, inventory management, system reports, and a Tax Calculator Service, which will be available to other functions and includes various tax returns such as Forms 1040, 1041, 1065, 1120, and 1120S.

### Image Documents for Compliance (IDC)

IDC provides SB/SE and W&I campus operations with online access to images of correspondence, 1040Xs, and notices received by Compliance employees. This will enable operations to move from a paper-intensive system to a modernized, web-accessible, digital image-based system.

### The TEGE Reporting and Electronic Examination System (TECCS)

TECCS is a new initiative building upon a foundation to more fully develop case management functions, consolidate examination tools required by end users, and provide robust reporting and issue management functionality.

## Filing & Payment Compliance

### Definition

The Filing & Payment Compliance (F&PC) Business Domain includes the investigation and collection of tax delinquencies (payment and filing) from large and complex businesses by Field Revenue Officers, as well as the resolution of simpler tax issues by CSRs and TEs in Automated Collection Sites and campus operations across the country. Through these various activities, this domain supports the Service's overall goal of promoting and increasing voluntary compliance with the tax system.

### Opportunities

The investment opportunities being pursued by F&PC are:

#### Goals:

- Improve the measurement and detection of non-compliance
- Better allocate enforcement resources
- Leverage enforcement activities with other governmental agencies, external partners, stakeholders, and the media
- Expand the scope and accessibility of services offered electronically
- Deliver modernized systems designed to strengthen collection and other enforcement efforts and to meet taxpayer and practitioner needs and service expectations

#### Benefits:

- Increase taxpayer reporting, compliance, and revenue
- Decrease collection cycle time and the number of overage cases
- Increase staff effectiveness and productivity and reduce mailing and manual processing costs
- Improve customer service

Opportunity	Expected Business Outcomes
Expand the use of third party information for case selection/treatment assignment	Data from external sources will be used to feed analytical models that will help identify non-filers, prioritize and select cases, determine appropriate treatment streams, and facilitate case resolution by pre-populating information provided to front-line employees.
Implement a more flexible and easily adaptable process to select workload and assign treatment streams	Data from a number of internal and external sources will be utilized to develop models and algorithms for determining the risk associated with each case. Automated business rules will then assign cases to the most appropriate treatment stream to achieve the best resolution at the lowest cost. Historical results data will help identify trends and adjust the models and business rules accordingly.
Enhance and integrate case management capabilities	Improved systems will allow for better case activity tracking (contact history, treatment, and issues), status, and cycle time to closure. They will allow for more effective assignment, control, and management of inventory across different channels of communication, including the Internet, e-mail, phone, fax, mail, and web-chat.
Construct a data asset to associate data sources and allow the development of decision analytics	A comprehensive data repository will allow the association of third party and tax return information to payment, case disposition results, and treatment activity for each closed collection case, enabling historical analysis of taxpayer segments in order to refine treatment streams.

Opportunity	Expected Business Outcomes
Enhance non-filer case identification, prioritization, and delivery through improved processes, data, and technology	Information from a variety of internal and external sources will be used to create analytical models to better identify possible non-filers, evaluate the risk of each case, and prioritize work for assignment to the appropriate compliance treatment stream.
Utilize Private Collection Agencies to resolve delinquent accounts	Private Collection Agencies represent a significant portion of the overall F&PC strategy for the future. Systems will allow for appropriate case identification, secure routing, and control of cases and data to these external partners.
Leverage enforcement activities with external partner and stakeholders and expand scope of services offered electronically	Financial institutions and large employers will receive and respond to levies through an automated process that will reduce mailing and handling costs and case cycle time.

## Potential Future Projects and Programs – Filing & Payment Compliance

### Filing & Payment Compliance (F&PC) Program

F&PC enhances the processes and technologies that support the IRS’ filing and payment compliance activities in conjunction with other compliance enhancements and initiatives currently underway or planned. The primary focus of F&PC Release 1, also referred to as Private Debt Collection, is to commission the private collection industry to assist in collecting delinquent taxes and reducing the size and growth of the IRS’ delinquent tax backlog for Tax Delinquent Accounts and Taxpayer Delinquency Investigations. Current IRS collection processes and systems cannot handle the annual volume of cases being generated, resulting in a growing backlog, many of which remain unresolved for significant lengths of time because of limited resources.

### Automated Substitute for Return Employee Access (ASFR-EASE)

This project improves integration between ASFR and IDRS by re-writing the ASFR business rules, writing the new rules into a relational-based language such as Oracle, establishing a separate database to store and recall ASFR data, creating a web-based environment for all users, creating a secured system for taxpayers and Service employees to submit or retrieve relevant data, and processing all system calls through a new server.

### Business Master File Case Creation Non-Filer Identification Program (BMF CCNIP)

This program will create a database to manage BMF case creation inventory. It allows for systemic and ad hoc inventory selections designed to meet business needs, controls volume to allow for a smooth level of inventory for notice processing, and improves workload selection by incorporating data from the Information Returns Master File, Employee Plans Master File, Combined Annual Wage Reporting, Payer Master File, and state tax agencies.

### Consolidated Decision Analytics

This project utilizes existing tools and best practices to provide a consistent, flexible, and integrated tool for case identification, selection, and assignment. It is entity-based for all BODs and supports the use of internal and external data, subject matter expert experiences, and computer models for decisions.

## Expanded Compliance Data Warehouse (E-CDW)

Researchers will use a variety of quantitative techniques (i.e., modeling, data mining) to improve existing workload identification and prioritization algorithms and evaluate alternative treatment streams. Taxpayer characteristics, third party information, treatment activities, and responses will be linked into a single data repository for conducting quantitative analysis to ensure cases receive the most effective and efficient treatments. This enhancement may facilitate a link to the Pre-populated Collection Information Statement (PCIS) and third party brokers.

## E-Lien

E-Lien provides electronic filing of Notice of Federal Tax Liens (NFTL) and Certificates of Release. NFTL recording data will be received electronically, eliminating the need to process lost lien reports. Filing fees will be paid via electronic funds transfer activity through an interface with the Integrated Financial System (IFS) to generate the transfer. A web site will be developed to enhance communications between the IRS and state/local jurisdictions.

## Integrated Collections System (ICS) to Windows

This project will improve maintainability and flexibility by allowing conversion of the existing Unix-based system to Windows.

## Pre-populated Collection Information Statement (PCIS)

PCIS enables the extraction of third party financial information from various sources to pre-populate financial statements in balance due cases for individuals and businesses. It expands the use of third party financial information for case identification, selection, assignment, and treatment. This information is brokered to financial statements (433F, 433 A&B) in various systems.

## Bulk Electronic Levy (BEL)

BEL will automate the issuance of levies and the receipt of levy responses from financial institutions and large employers. It will improve compliance by accelerating the application of levies and the resulting collection of delinquent taxes while reducing IRS and third party handling costs.

# Criminal Investigation

## Definition

The Criminal Investigation Business Domain is uniquely responsible for enforcing criminal statutes of the Internal Revenue Code and other related statutes. Enforcement of the tax law fosters tax compliance to preserve the integrity and equity in the tax system. Identification and investigation of money laundering, illegal drug activity, and counterterrorism also protects the American public from abusive schemes that erode tax and financial infrastructure, the ravages of illegal drugs, and internal and external terrorist threats.

Criminal Investigation maintains close working relationships with the Department of Justice's Tax Division, Offices of the Attorney General, and other law enforcement agencies. The Tax Division maintains responsibility for approving the prosecution of all criminal tax offenses. The offices of Attorney General are the conduit for criminal enforcement efforts through grand jury investigations and the prosecution of both administrative and grand jury cases.

### Goals:

- Develop the investigative techniques needed to combat tax evasion, money laundering, and terrorist financing through the use of technologies available today and in the future
- Enable agents to work complex, high-impact cases, achieve consistently high conviction rates, and provide access to current and accurate case inventories
- Streamline processes to aid management reviews and approvals
- Expedite case prosecutions and closures
- Accurately track seized assets and equitable distribution of proceeds

### Benefits:

- Improve processing of electronic data related to criminal investigations
- Reduce processing time of criminal-related data items leading to faster prosecution
- Expedite identification of criminal activities and response time

## Opportunities

The identified opportunities for Criminal Investigation are:

Opportunity	Expected Business Outcomes
Enhance management of seized assets, capture full cost of seizure activities, and equitably distribute proceeds	Track and manage assets across enforcement agencies, from seizure to sale, capturing all costs and ensuring equitable distribution of proceeds.
Standardize, streamline, and specify processes such as enforcement actions, management approvals, and evidence control	Improve law enforcement activity processes and procedures, including workload management, planning, and scheduling activities for expediting investigations. Senior managers will also receive information on resources and work assignments to assist in the decision making process.
Provide the ability to rapidly identify and respond to the constant change in tax schemes, redirect investigative resources appropriately, and rigorously manage high-impact cases	Proactively identify and quickly respond to changing tax schemes. Expedite the identification and analysis of electronic data from multiple sources to allow for better case selection and enhanced investigative support.
Proactively identify patterns of illegal activities through data analysis in support of tax law enforcement, counterterrorism, and other high-priority criminal investigations	Enable identification of new patterns of tax fraud and other financial crimes, detect recurring patterns of criminal activity, and predict future criminal activity based upon established patterns and relationships. Broaden Criminal Investigation's analytical capabilities by improving access to diverse data sources.

## Potential Future Projects and Programs – Criminal Investigation

### Asset Forfeiture Tracking and Retrieval System (AFTRAK)

AFTRAK will substantially enhance support for the business processes related to asset seizure and forfeiture. It will maintain assets from seizure through disposition, enabling costs to be tracked and managed and improving the distribution of proceeds from asset forfeiture sales. AFTRAK will also enable proceeds to be tracked from the disposition of assets held by other federal agencies. Criminal Investigation has approximately 4,500 seized assets, with an estimated worth over \$500 million, in inventory. Proceeds from the sale of assets can contribute to compensating victims as well as to supporting law enforcement activities.

### Investigative Data Analytics (IDA)

IDA expedites the identification and analysis of electronic data from multiple sources to enhance case selection and to support investigative priorities. It develops new techniques to analyze tax data and other public, law enforcement, and financial data and predicts future criminal activity based upon established patterns and relationships.

### E-Crimes Environment

The E-Crimes Environment project will leverage emerging technologies to effectively preserve, store, and process seized digital evidence in forensically sound manners to support criminal investigations. In the future, it will provide a secure work environment featuring flexible connectivity, high capacity and scalable storage, and servers with remote access and interaction capabilities. This will better enable large volumes of seized electronic data to be stored, processed, analyzed, and managed without geographic or logistical constraints. Forensic analysis tools and other analytical software could be deployed more rapidly, and remote collaboration would be possible without physically reallocating staff resources.

## Internal Management

### Definition

The Internal Management Business Domain includes enterprise-wide administrative systems related to workforce support (time reporting and payroll), human capital (performance evaluation, position management, staffing, and personnel actions), administrative and custodial accounting (including financial reporting, the financial statements, and associated audit), budget, strategic planning and performance measurement, procurement, facilities, and training.

### Opportunities

Internal Management is currently pursuing two opportunities to improve financial management and address a long-standing material weakness:

#### Goals:

- Deliver sound financial management
- Team with internal and external customers to fulfill needs
- Expand analytical expertise and enhance business knowledge
- Reduce customer burden

#### Benefits:

- Deliver sound financial management for both administrative and custodial accounting in accordance with all applicable accounting standards, enabling the IRS to maintain clean audit opinions
- Provide more timely and comprehensive reporting
- Provide improved administrative service levels, customer satisfaction, and cost savings through enhanced delivery
- Prepare financial statements more efficiently

Opportunity	Expected Business Outcomes
Improve core financial functions	Take advantage of vendor-provided software improvements that will improve business processes and increase accuracy and timeliness of financial data. Improve budget execution functionality. Integrate cost accounting and performance. Maintain clean audit opinion.
Modernize revenue financial management systems and processes	Consolidate service center accounting and improve and integrate custodial systems. Maintain clean audit opinion and eliminate financial material weakness.

## Potential Future Projects and Programs – Internal Management

### Integrated Financial System (IFS)

IFS, the Service’s core accounting and financial management system, is running on an outdated software version and therefore should be replaced. In addition, IFS operations and support will be migrated to a shared services provider in alignment with OMB’s Financial Management Line of Business.

### Interim Revenue Accounting System (IRACS)

As the Service’s revenue accounting system of record, IRACS records and reports revenue financial data processed from all automated and manual tax systems. The IRS must redesign the existing IRACS to add general ledger accounts and trace ID for the subsidiary ledger to eliminate a financial statement audit material weakness. Upon completion, IRACS will meet OMB requirements and comply with federal accounting standards (U.S. standard general ledger compliance).

## **Technical Domains**

The services and products delivered by the IT organization.

## Technical Domains

The IRS' IT organization, known as Modernization and Information Technology Services (MITS), functions as a business—delivering services and products to all divisions of the Service, to other governmental agencies, and to the community of tax preparers. In the MV&S, the functional groupings that make up MITS are also referred to as Technical Domains.

This section provides initial Technical Domain strategies. In Year 3, the Technical Domains will refine their strategies and identify specific potential investments, projects, or programs to carry out those strategies.

The Technical Domain strategies were formulated to align with the IRS IT strategic goals. The goals are:

- Improve service to our customers.
- Deliver modernized systems and infrastructure.
- Increase the value of MITS resources.
- Improve IT security and protection.

The heart of the Technical Domains is to deliver base services and products that support applications and systems for the Business Domains. IT operations is the core underpinning to modernizing the front-line tax administration, including delivering taxpayer services, enforcing taxpayer obligations, and securing critical applications and systems that protect taxpayer information and data.

In addition, the Technical Domain strategies will look for ways to reduce costs, improve operational efficiencies, and build technical capabilities that will support changing business priorities.

## Applications Development

### Definition

The mission of the Applications Development (AD) Domain is to deliver integrated software solutions that address the objectives and priorities of the IRS. This translates into specific focus areas—delivering applications for the MV&S, delivering applications to support the filing season, and maintaining legacy technology systems. Achieving these objectives requires a strong IT product and service delivery capability. Central to this capability is a stable, efficient, and effective applications development function recognized as:

- An IRS “core competency” to be developed and nurtured.
- A valuable input to inform and advise business strategic planning and business initiatives.
- A demonstration of robust technical and management capabilities that enable the IRS to operate as an effective program and systems integrator.

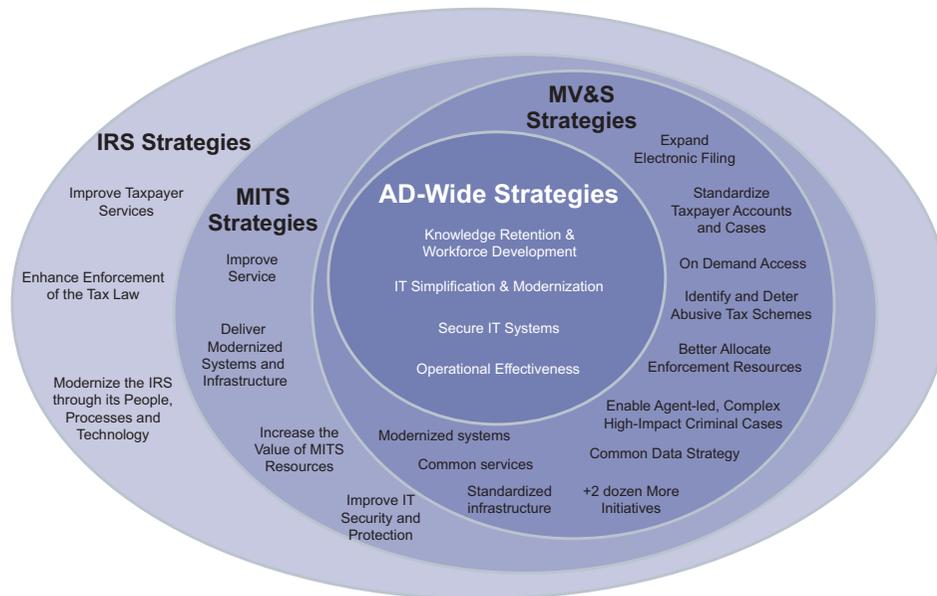
### Goals:

- Deliver secure filing seasons and modernization programs
- Establish mechanisms to retain and sustain high levels of expertise in business, systems, and IT knowledge
- Consolidate and retire applications, simplifying our environment and leveraging common services to enable reuse and reduce costs
- Improve technology management practices and reduce operating costs
- Implement robust program management, software engineering, and integration capabilities
- Align with Business Domain strategies to address operations and maintenance, consolidation, and retirements within available budget
- Enhance development efficiency and streamline processes
- Reduce system downtime due to application errors

## Opportunities

The AD Domain strategic plan represents a “call to arms” to build a sustainable applications development organization. The strategy establishes priority initiatives to balance new and legacy system enhancement investments. This shift in focus will enable the domain to achieve sustainability and create a long-term operating model transforming applications development into a core “business” function.

Figure 6: AD Strategy Alignment



To attain these objectives, the IRS has identified four critical strategies to build and maintain a sustainable development capability that effectively support the filing season:

- **Knowledge Retention and Workforce Development** – Provides positive control over business and technical data held by suppliers and employees through succession planning, continuous learning, and a program that leverages the MITS Human Capital Strategic Plan.
- **IT Simplification and Modernization** – Results in a sustainable IT environment that effectively delivers business solutions through a comprehensive retirement and consolidation program, common services and reuse, and adoption of a software engineering model.
- **Operational Effectiveness** – Enables AD to operate as an effective program and systems integrator via initiatives focused on improved program management and governance, workforce agility, and transparency.
- **Secure IT Systems** – Increases the security of IRS IT systems and drives increased IRS compliance with Federal Information Systems Management Act (FISMA) standards through three key program initiatives: audit trails, IT security management, and business continuity.

Aligned with the identified strategies, several initiatives are currently underway. For example:

- **Retirement and Consolidation** – Accomplish a comprehensive approach to IT retirements through re-factoring, re-engineering, consolidation, targeted retirement without replacement, and institutionalizing retirement planning in the life cycle. A series of initiatives are planned that focus on establishing a retirement roadmap to drive selective application retirements without replacement, eliminate low-use applications (including non-standard applications), institute an application retirement incentive program, drive towards



larger-scale applications consolidation, migrate away from platform tool obsolescence, eliminate “one-off” technology, identify opportunities for business process re-engineering, and ultimately, realize wholesale system retirements.

- **Program Management and Governance** – Continue to develop and enhance program management, systems integration, and project management capabilities of AD Domain employees and leadership. A series of initiatives are planned that focus on growing the project management cadre and their operational proficiencies, developing a cross-domain operating model for very large programs that span domains and/or require extensive business involvement, improving cost estimation and sizing practices, and improving the effectiveness of contracting practices.
- **Transparency** – Provide the necessary visibility into resource data to enable AD Domain leadership, MITS, and business partners to effectively communicate conditions and perform effective decision making in a defensible and credible manner. A series of initiatives will focus on addressing unfunded operations and maintenance efforts arising from new development efforts, implementing discretionary demand management within the AD Domain, collaboratively stabilizing priorities with business, establishing performance management measures, and conducting workload-balanced release planning.
- **Audit Trails** – Implement a comprehensive program to develop and deploy an AD Domain-wide audit trail capability consistent with the findings and recommendations of a recent Treasury Inspector General for Tax Administration (TIGTA) audit report. A series of initiatives will focus on developing audit requirements that can be standardized and extended across application types, audit guides, and training, developing computer system specific audit plans, and standing up a project office to support operational rollout of the program.

Each domain area will develop their strategic plan based on alignment with the MV&S Business Domain strategies and AD priorities. The partnership between business and IT will yield a comprehensive and integrated overall AD-wide, longer-term strategic plan that is linked with IRS business priorities.

## Results and Benefits

Establishing applications development as a core competency requires transforming this IRS function into a core MITS “business” function to be leveraged as a strategic tool. The AD Domain is focused on balancing new system and technology delivery with investment in legacy systems maintenance and enhancement. This enables AD to continue delivering its mission and to establish a sustainable long-term operating model by realizing:

- Workforce alignment to IRS priorities that are insulated from loss of institutional business, systems, and IT knowledge.
- A sustainable technology base and improved technology management practices.
- Consistency in quality of applications delivered into production within cost and schedule parameters and developed following required standards.
- An increase in awareness and early detection of at-risk projects.
- Business and MITS alignment on goals and priorities.
- A reduction in cost.
- Transparency.

The future direction to build Business Domain architectures will also inform technology options and constraints and provide the business with additional benefits. This will be done proactively to inform investment decisions and to promote greater alignment to higher-level strategies. In addition, the domain architectures will facilitate balancing desired process and technology changes in a manner mindful of IRS management, business, and technical capacity.

## Enterprise Services

### Definition

The Enterprise Services (ES) Domain provides essential cross-cutting services and functions across the IT organization. The ES Domain sets critical enterprise technology and process standards to promote compatibility and common practices across the IT organization, engineers project and program systems solutions, establishes frameworks for IT demand management and prioritization, and establishes governance and control methodologies for the IT portfolio. The ES Domain also currently acts as a service provider within the IT organization, bringing the appropriate types of subject matter expertise scaled to fit the requirements of specific technical and/or operational activities.

### Opportunities

The ES Domain has identified a number of opportunities to provide essential cross-cutting services and functions across the IRS. The opportunities are:

- Apply consistent, fit-for-purpose, technical and process standards across an IT portfolio consisting of hundreds of systems and projects spanning the spectrum of scale and complexity.
- Fully institutionalize the tiered governance, control, portfolio investment, demand management, requirements management, and other process improvements across the enterprise.
- Define and implement an optimal workforce environment that includes development of required leadership and technical skills in key disciplines, including systems architecture, engineering, and project management.
- In-source core systems engineering skills while maintaining and leveraging strong relationships with external contractor firms.
- Mature the enterprise architecture to appropriately incorporate legacy environment into the future state, transition architecture, and project releases.
- Expand common application and infrastructure services to promote re-use and maintainability of software and systems while improving customer service levels and systems security, and implement an IRS SOA to promote consistent, reusable design patterns, and tools.
- Improve technology and infrastructure to support transactional and e-government capabilities and services.
- Apply consistent security and privacy policies and standards to the IT portfolio.
- Mature project estimating methods, tools, and cost data for IT initiatives to achieve more accurate and consistent life cycle estimates of scope, cost, schedule, staffing, and quality.

### Goals:

- Improve delivery of enterprise-wide services through application of fit-for-purpose technology and processes, as well as knowledge development and transfer
- Transition architecture and engineering leadership and key staff roles from contractor organizations to the IRS
- Establish comprehensive IT portfolio prioritization and management capabilities
- Institutionalize consistent technology and process methods and standards that enable IT capabilities to be successfully delivered
- Reduce complexity in operational and technical standards, platforms, and architectures
- Deliver infrastructure strategy and key components
- Embed security policy into architecture of IT systems and services
- Oversee all IRS program systems integration and engineering



Aligned with the future opportunities, below are examples of initiatives that are currently underway.

- Deploying a tiered governance approach that ensures each IT project is governed at the appropriate level within the organization, that each project is measured using a common set of key performance indicators, and that potential project risks are escalated as needed.
- Improving the portal through which the public, tax professionals, and employees access IRS capabilities. Using a near-term and long-term approach to improvement, MITS is increasing the stability and reliability of the existing portal infrastructure by upgrading the hardware and software to increase the availability of tax preparer and taxpayer applications for the 2007 filing season. Concurrently, the IRS is designing a new portal infrastructure to refresh and upgrade the portal platforms, move the infrastructure to IRS facilities, and implement additional performance and disaster recovery capabilities.

## Results and Benefits

Execution of the ES Domain strategy will result in significant benefits, for example:

- In-sourcing core systems engineering skills and fully integrating external contractor teams will enable the IRS to have necessary program engineering leadership and accountability, while effectively leveraging outside contractor expertise.
- Effective workforce development and succession planning will enable improved service and delivery quality, effective transition and knowledge transfer, and high levels of employee engagement and productivity.
- Better investment decisions ensure scarce resources are applied to the highest priorities and impacts for the Service.
- Compliance with improved fit-for-purpose processes/methodologies will reduce operations and maintenance costs and risks associated with common services, system retirements, etc.
- Consistent and well-coordinated planning for deploying capabilities will result in improved customer service due to higher quality, improved system stability, and reliability.
- Building a strong systems architecture and engineering capability will result in the effective management and execution of common application and infrastructure services to improve system dependability, manageability, and security. Simplified architectures and designs will reduce the complexity of existing systems resulting in significant operational efficiencies and cost savings throughout the life of the system.
- Integrated technical and process architectures will result in lower costs, higher service levels, and faster program delivery.
- Embedding IRS security and privacy policies in the architecture and engineering best practices will provide consistent security application and reduces the risk of possible security breaches.

## End User Equipment & Services

### Definition

The End User Equipment & Services (EUES) Domain mission is to ensure timely provisioning and/or restoration of desk side IT equipment and services that support customer mission requirements, security/privacy requirements, and established service level commitments.

EUES serves as the single point-of-contact for customers to request MITS products and services via telephone, web, and e-mail. It provides support and guidance for the full range of planning, directing, managing, and executing activities related to the desktop environment, including workstations and peripherals, voice and data communications, and IT equipment. It also supports inventory management of ADP and non-ADP equipment, workstation software integration, testing, and distribution; password management applications and data security; the Volunteer Income Tax Program to ensure filing season readiness; and the Integrated Document Solution Enterprise.

### Opportunities

The EUES Domain has identified a number of opportunities in providing and supporting desktop automation needs for the IRS. The opportunities are:

- Re-engineer service desk and front-line service delivery processes to improve efficiency, effectiveness, and consistency. Develop and use robust performance measures to monitor, evaluate, and adjust service delivery performance. Deliver a single enterprise systems management environment to facilitate business systems monitoring and improve end-to-end systems availability to customers.
- Build a high performing organizational foundation through deployment of disciplined business management governance and change control frameworks. Sponsor the continued evolution of ITSM architecture development and deployment for the service desk, incident management, and asset management process areas. Support the OMB Lines of Business effort in benchmarking end user services cost and performance and promote the IRS as a potential pilot for achieving HPO designation through business process reengineering.
- Sustain the EUES infrastructure by developing a desk side equipment technology roadmap to drive technology refreshment. Improve contract management discipline over hardware, software, and service procurements and develop commodity-based acquisition strategies to leverage buying power. Develop repeatable processes for mitigating workstation security vulnerabilities through compliance-level monitoring and corrective actions.
- Increase workforce capability by deploying technical certifications training and implementing succession plans, staffing plans, and workforce transition plans.

The five-year plan for EUES to support this effort includes the design and successful implementation of a Seat Management HPO. Operational cost targets, as well as performance level targets, will be identified to streamline operations and improve service delivery.

#### Goals:

- Improve one-stop service delivery and support
- Earn OMB designation as a High Performing Organization (HPO)
- Sustain desk side equipment and services infrastructure
- Increase workforce capability

## Results and Benefits

Overall improvement to the services, network availability, and performance will be improved through the execution of the EUES Domain strategy. Benefits include:

- A service desk that is the preferred single point-of-contact for IT products and services.
- An HPO with a business case for continued in-sourcing of seat management services.
- Cost and performance attributes that are comparable with industry and aligned with OMB expectations.
- A Concept-of-Operations that is aligned to ITSM architecture.
- An Infrastructure Library (ITIL) process maturity level within the range of 3.5 to 4 rating of the Gartner industry model.
- A reduction and/or mitigation of risks for information security threats to taxpayer information, personally identifiable information (PII), and business operations.
- An engaged workforce with reduced turnover.

Customer service and operational costs will improve significantly through the EUES Domain strategy.

## Enterprise Networks

### Definition

The Enterprise Network (EN) Domain includes local and wide area network and data transmission services. The strategy for this domain will position the IRS for the 21st century by embracing IT managed services and by tightly coupling its IT operations with business processes. Over the next five years, the IRS will experience unprecedented demand for new IT services to serve a variety of requirements, from taxpayer e-filing and self assistance, to security and audit compliance, to interactive taxpayer consultation. The ability to adapt rapidly while maintaining a tight control on security, cost, and quality will be essential. A robust, reliable, and predictable network will be a key element supporting the IRS.

### Opportunities

The EN Domain strategy is in place to proactively support its customers. A services focus backed by metrics will be an integral component of this domain's functions. The domain will be organized and structured to expedite workflow and facilitate information sharing. The following opportunities were identified for the EN Domain:

- Acquire full control of all network assets and operations, from the network-attached device to the network fabric, or "plug-to-plug."
- Establish processes and procedures to analyze, design, and integrate solutions into the network in order to deploy modernized and legacy system requirements.
- Converge network applications, facilities, and equipment to enhance service quality, manageability, and interoperability.
- Deploy the appropriate technology and capacity at the right time through collaborative and coordinated enterprise-wide strategic planning.

### Goals:

- Improve network service delivery through the adoption of industry standards for managed services
- Provide commonly available services in a clearly communicated and comprehensive catalog
- Apply consistent integrated process models and standards to enterprise-wide networks
- Automate routine tasks to gain efficiencies
- Control all aspects of network infrastructure management

- Implement managed service-based costing models to assess, manage, and plan based on the true cost of delivering network services.
- Establish enterprise network asset management processes and inventory controls.
- Leverage the IT Human Capital Management Domain strategy to optimize EN resources through retention, succession, and career development programs.

In alignment with the future opportunities, the EN Domain has several initiatives underway. Examples include:

- **The Treasury Network (TNet) Program** serves as the foundation for convergence, which encompasses the acquisition, technology, and program management elements of telecom service provisioning. As the new standard for delivering and managing wide area network (WAN) services in a federal environment, TNet will provide a world-class WAN solution that satisfies the technical, security, and business needs for the entire Treasury organization. TNet introduces a state-of-the-art, federally-compliant common security architecture, while allowing each Bureau to define and maintain its own level of IT security within its own domain. In the steady-state TNet environment, Bureaus can focus valuable resources on the business mission because the TNet vendor assumes virtually all technical operations. Under a managed service, the TNet vendor is required to perform at or above the pre-defined service level agreements (SLAs). TNet offers a streamlined ordering process and an efficient, simplified invoicing process.
- **Internet Protocol version 6 (IPv6)** is a network layer Internet Protocol (IP) used to exchange data across a packet-switched network. Though IPv6 has many features, its main feature is that it affords a much larger address space, providing the IRS with an almost unlimited number of IP addresses. IPv6 will open the door to a new frontier in networking and communications and will enable enhanced mobility. Also noteworthy is the IPv6 IPsec network layer security, which is an integral part of the base protocol and enables IP network-layer encryption and authentication for greater security.
- **Network Access Control (NAC)** provides enhanced network security. It will implement an identity-based level of audit, which provides improved and more granular control of user access to enterprise resources and improved overall security. NAC creates a telecommunication security flexible architecture, which enforces security policy compliance regardless of where users access enterprise networks, computing systems, and data. The design will be based on a scalable COTS-based technology, which provides an overall solution that could grow with the IRS environment and coexist with IRS investments. It will implement a pre- and post-admission (remediation) capability, which along with intrusion detection and prevention, can disable access if a breach of enterprise user policies or unauthorized activity occurs. An enterprise implementation of a NAC solution will leverage prior technical architecture, systems, and user databases in the legacy and modernized environments. Implementation of NAC directly addresses computer security material weaknesses identified by TIGTA and the Government Accountability Office.

## Results and Benefits

Executing the EN Domain strategy will benefit the IRS through:

- Streamlining network operations to proactively prevent and resolve internal incidents.
- Optimizing EN resources to manage network operations.
- Adapting the network management structure and processes quickly to changes in technology and business requirements.
- Reducing costs and gaining efficiencies while providing flexible network and communications services.

## Enterprise Operations

### Definition

The Enterprise Operations (EOPS) Domain must be prepared to respond to an increasing number of customers with complex IT requirements. The vision of the EOPS Domain is to mature into a world-class operation that will support the mainframe and server environment for the entire service with incident and problem management processes fully defined and implemented. To do this, the EOPS Domain will provide efficient, cost effective, secure, and highly reliable computing (server and mainframe) services for all IRS business entities and taxpayers.

### Opportunities

The EOPS Domain has identified a number of opportunities to support IRS computing services. They are:

- Transition servers from various external organizations to EOPS to ensure optimal performance and cost effectiveness.
- Stand up the Service Delivery Command Center to provide a single control function for incident and problem management, as well as proactive infrastructure monitoring.
- Improve service delivery by consolidating SLAs.
- Improve security for computer assets and build FISMA requirements into work processes.
- Establish a uniform operating environment, including standardization and common toolsets.
- Improve mainframe and server computer infrastructure control and security by refreshing obsolete hardware and software, introducing new technologies, and implementing business best practices.
- Optimize business resumption/disaster recovery scenarios via server consolidation and virtualization efforts.
- Optimize the EOPS workforce by deploying an integrated and robust MITS Human Capital strategy, including training, certifications, succession planning, and career development.

Aligned with the future opportunities, the EOPS Domain has several initiatives underway. Examples include:

- **Establish the Service Delivery Command Center** – Provide incident and problem management through systemic infrastructure monitoring to ensure and maintain normal IT service operations.
- **Migrate the Non-EOPS Domain Servers** – Develop and implement the transfer of server operations to the EOPS Domain to ensure security requirements and infrastructure efficiencies are met.

These opportunities will allow the EOPS Domain to ensure the safety of IRS personnel, facilities, infrastructure, and taxpayer information while balancing workforce renewal with the expectation to deliver cost effective and efficient services.

### Results and Benefits

Execution of the EOPS Domain strategy will improve service delivery, security, and operational efficiency. Specific benefits include:

- Optimizes and secures IT mainframe, server, and computer assets.
- Standardizes an operating environment with policies, procedures, processes, and tools.
- Improves timeliness and quality of all service-level commitments.
- Maximizes the value of EOPS workforce.

In summary, service and operational costs will improve significantly with the delivery of the EOPS Domain strategy.

#### Goals:

- Improve service delivery of operations
- Increase the value and maximize the use of EOPS resources
- Optimize technical infrastructure
- Secure and control all IT mainframe, server, and computer assets
- Standardize tools, operating systems, databases, and COTS software
- Refresh and modernize technology

## **Service Domains**

The services necessary to support the effective and secure execution of the core mission-critical business functions. Domains are defined by cross-cutting services.

## Service Domains

In the first cycle of the MV&S, there were two Service Domains—Common Business Services and Data, Infrastructure, and Security Services. The first year focused on understanding what cross-cutting services may be established across the Business Domains and the mechanism for collecting and ultimately identifying both business and technical common services. Since then, the Service Domains have evolved to include a more rigorous approach to delivering cross-cutting services as well as expanded more deeply into understanding those common areas.

This section reflects the maturation of the Service Domain strategies. The Security and Privacy and Common Business Service Domains are farther along and describe the opportunities as potential candidates for investment proposals. The Enterprise Data, IT Service Management, and IT Human Capital Management Domains are in the early stages of development and have not yet identified specific initiatives.

### Goals:

- Improve data quality and confidence to enable business to make informed decisions
- Consolidate redundant data repositories
- Enforce common data standards
- Enable collaboration and integration across systems and applications by reducing point-to-point transfer of data

## Enterprise Data

### Definition

The Enterprise Data Domain provides guidance on all aspects of data management. The data management platform is responsible for five areas:

**Collect** – In accordance with federal laws and regulations, the IRS collects and processes large volumes of information. Structured data (i.e., tax returns or records) and unstructured data (i.e., taxpayer communications or IRS publications) are collected from a variety of sources.

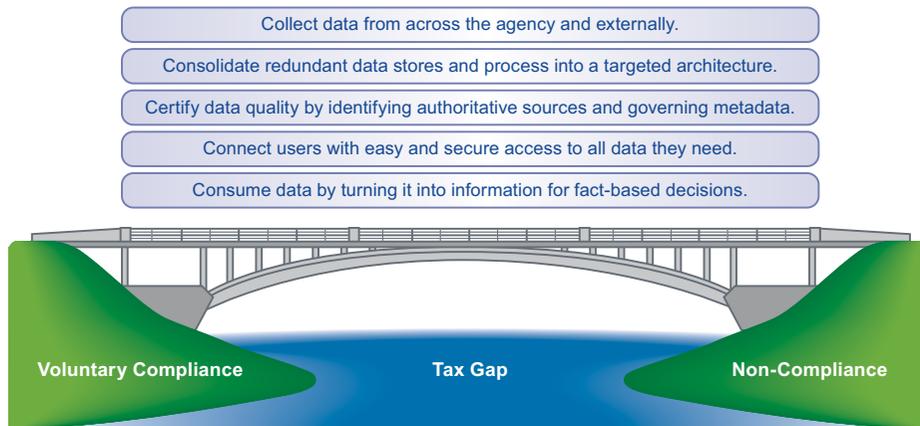
**Consolidate** – The IRS needs to consolidate and condense disjointed data into homogenized and distinct data, a process that can be helped by new technology. What not to consolidate is as important as what to consolidate. The objective is to present the most relevant data, but have the technology to access the supporting data if needed. Having the architecture to support proper response times and easily identify the answer to queries is paramount.

**Certify** – When we certify, we are designating the authoritative sources, providing governance, and ensuring the data quality is complete, consistent, comprehensible, and correct.

**Connect** – Collecting, consolidating, and certifying the data has little value if it is locked up in a computer or is too cumbersome to use. The amount of data is not the key issue; it is the form that data can easily be digested, comprehended, integrated, or even accessed. Connecting the data to the users requires proper security and access. In addition, the proper metadata requires educated business users to know what data is available and for IT specialists to know how to integrate the available data.

**Consume** – Lastly, the ultimate goal in the data management platform is to consume the data in the proper or desired state to assist the user in efficiently making the right decisions. This includes the process from beginning to end, including queries, reports, dashboards, scorecards, data mining, online analytical processing, and visualization.

Figure 7: Building the Bridge to the Data Strategy



The Enterprise Data Domain is responsible for defining an enterprise-wide data environment that is more easily and efficiently organized and can identify, share, reuse, and correlate data that adds value to the IRS.

### Opportunities

The Enterprise Data Domain has wide-ranging opportunities, such as:

- Improve the timeliness and reduce the complexity of extracts between systems to ensure fact-based decision making.
- Establish a governance model to coordinate organizational reporting requirements to reduce the number of reporting systems and data redundancy.
- Standardize data and documentation standards to enable Service-wide decision making.
- Outline and capture facts that describe key metadata and processes that help locate, manage, and use the data.
- Address the security, integration, and consolidation of the many case management systems.
- Create a data mart strategy to meet the needs of subject areas and Business Operating Divisions.

These opportunities are intended to ensure the proper portfolio of projects and functionality exists to enable the efficient and effective use of data.

### Results and Benefits

Delivering on the Enterprise Data Domain strategy will provide the following benefits:

- **Increase productivity** – Reduce the number of redundant data stores, which helps reduce the range of expertise required to manage and mine data.
- **Better use and management of business information** – Build out metadata repository to provide data elements to a larger audience. Increased data clarity and accessibility across the IRS will improve effective issue detection and information-driven decisions for compliance and case selection.
- **Reduce costs** – Interact with SOA and provide standard data services, thus promoting reusability and developing the data access once rather than many times. Increased e-file, coupled with integrating residual paper returns at input, supports a single thread for all downstream processes.
- **React to change** – Centralize core functionality so needed changes/updates are implemented in one place as opposed to many independent applications, thus reducing development time and improving case selection.
- **Improve data security** – Consistent data classification as the IRS migrates away from the current point-to-point architecture allows data tagging based on security and sensitivity, which enables effective auditing.

Ultimately, a data-driven focus will enable the IRS to drive down the tax gap and improve taxpayer service.

## IT Service Management

### Definition

The IT Service Management (ITSM) Domain focuses on improving the way IT organizations deliver and support services to manage enterprise IT systems. Although managing technology is a necessary component of ITSM solutions, it is not a primary focus. Instead it addresses the need to align IT service delivery with business needs. This transformation of a traditional "business-IT paradigm" can be depicted by some of the following attributes: the traditional technology focus of IT becomes a process focus; fire fighting gives way to preventing incidents from happening in the first place; reactive efforts become proactive efforts; focus shifts from users to customers; isolated silos give way to integrated, enterprise-wide activities; one-off and ad hoc activities become repeatable and accountable; informal processes are formalized; IT's internal focus shifts to a focus on the business; and IT assumes a service orientation rather than an operational orientation. An enterprise-wide ITSM process and architecture will be established as the IRS adopts the discipline of ITSM.

#### Goals:

- Support and foster improved service delivery
- Establish an enterprise-wide ITSM process architecture
- Establish ITSM best practices
  - Improve service quality
  - Achieve business effectiveness
  - Adopt IT systems and tools efficiently
  - Reduce costs
  - Manage IT systems and services proactively

### Opportunities

It is vital for the IRS to produce enhanced service quality to the Business Operating Divisions it supports. This improved service quality will translate to enhanced business outcomes that will demonstrate value to the taxpayer. The following opportunities are being pursued to deliver an integrated approach to ITSM:

- Establish an enterprise process excellence program.
- Create a process baseline and five-year strategy.
- Develop a detailed target state design with a roadmap of milestones and activities and roles, responsibilities, and skills.
- Establish a partnership between the IT organization and the Business Domains.

These opportunities will ensure consistent and cohesive implementation across the IRS.

### Results and Benefits

Delivering on the opportunities identified as key objectives for the ITSM initiatives provide benefits to both the public and the IRS. Those benefits include:

- Avoid system downtime through proactive system availability and capacity monitoring.
- Improve technical outages caused by human error or miscommunication.
- Improve use of tools and reduce the overall purchasing and licensing costs.
- Establish enterprise-wide documented processes and procedures to reduce the dependency on individuals who provide institutional knowledge.
- Provide improved service levels, customer satisfaction, employee satisfaction, and cost savings through enhanced, efficient IT service delivery.
- Enable more effective workload distribution, efficient use of staff, and overall productivity.
- Reduce complexity of the ITSM portfolio through standardization.
- Improve communications from the adoption of a standard service-based process framework.
- Improve customer and IT management reporting.
- Improve integration of the people, processes, and technology needed to manage IT services.

## Security and Privacy

### Definition

The Security and Privacy Domain supports the IRS tax administration processes by ensuring taxpayer privacy and protecting taxpayer information and associated systems. The domain ensures security and privacy considerations are properly integrated into business processes and IT resources. Essential IRS business processes are supported by applying risk-based, cost-effective security and privacy protections, by monitoring the operational effectiveness of protections, and by providing capabilities for the recovery of critical operations. Domain policies further support the core missions and functions of the IRS by integrating legislative, regulatory, and departmental security and privacy requirements. This domain ensures data integrity, access control, and data privacy to secure both systems and sensitive information.

The Security and Privacy Domain supports the IRS’ commitment to protecting the personal information of taxpayers and employees, including the prevention of unauthorized access. To accomplish this, the domain’s primary objectives are to manage and control access to applications, information, and data; protect the infrastructure that contains the applications, information, and data; and protect the information and data entrusted to the IRS.

### Opportunities

The identified opportunities for the Security and Privacy Domain are:

#### Goals:

- Accomplish authentication, access control, and auditing using enterprise-wide security services
- Ensure security controls support taxpayer functions across the Internet and new business initiatives
- Improve the effectiveness of the IRS’ security posture
- Transfer data securely across the IRS network boundary
- Integrate the privacy requirements into business processes and IT resources

Opportunity	Expected Business Outcomes
Support the movement to an “outward-facing” IRS and provide secure electronic communications with external entities	Authentication of taxpayers is enabled without prior registration. Secure communications between the IRS and taxpayers, as well as encrypted e-mail between the IRS and other government agencies, is provided.
Ensure continuous operations for critical IRS systems	Risk-based disaster recovery processes for critical IRS systems are implemented. The time to identify, orient and respond to fast-paced threats from cyberspace is reduced.
Improve efficiency of IRS security controls	Security processes to provide documented and auditable security assurance are automated.
Establish enterprise-wide common security services	Achieve a capability that ensures consistency of security policy and compliance across IRS enterprise networks, computing resources, or data sources.
Take necessary actions to comply with OMB M-06-16, Homeland Security Presidential Directive (HSPD)-12, and Federal Information Processing Standard (FIPS)-201	Two-factor, or stronger, authentication schemes for remote access is implemented. Compliant Personal Identity Verification (PIV) card technology—along with the associated infrastructure, privacy controls, policy, and procedures for card issuance and management—is in use.

Opportunity	Expected Business Outcomes
Increase confidence in web-based interaction with the IRS and understand and respond to changing threats	All electronic forms of communications remain confidential and information is delivered only to the intended parties. The IRS manages and operates a security infrastructure that is resilient to attack. The IRS uses automated tools to manage, measure, and report on its security posture.
Resolve material weaknesses	Audit mechanisms and disaster recovery capabilities throughout the IRS are improved.
Expand capability to secure stored data	All IRS data on mobile devices and portable media is encrypted and full disk encryption is implemented for both laptops and desktops.
Ensure the security and privacy effects of newly adopted technologies	The IRS implements virtualization, Voice over Internet Protocol (VoIP), IPv6, wireless, and network convergence securely.
Support the use of digital certificates for user identity and authentication within the IRS	A Public Key Infrastructure (PKI) capability is established.
Support the integration of web services and a SOA	The IRS establishes enterprise-wide common security services to business applications and other SOA components.
Prevent or respond to exploits of hardware and software used by the IRS	The IRS prevents security incidents from occurring and protects data integrity and privacy.
Invest in security and privacy for the long term	The skills of security and privacy staff are enhanced and maintained.

## Potential Future Projects and Programs – Security and Privacy

### Laptop, Desktop, PDA, and Removable Device Encryption

Ensures the protection of sensitive data from unauthorized access and disclosure. Provides platform (laptops, desktops, removable devices, PDA, etc.) encryption capabilities and a key management facility to manage and maintain keys.

### Tape Encryption and Electronic Data Exchange

Establishes methods to encrypt removable media exchanges and electronic transfers between the IRS and its partners, as well as for removable media used for IRS archival purposes.

### Two-Factor Authentication

Provides a two-factor authentication capability to supplement the current authentication method used by IRS' remote users (OMB 6-16 Mandate).

### Auditing

Monitors key networks and systems to identify unauthorized activities and changes to system security settings. Includes technical mechanisms and documented procedures to monitor, report, and review both authorized and unauthorized use of computing systems. IRS Internal Revenue Manual 10.8.3, Audit Logging Security Standards, provides auditing guidance.

## **Disaster Recovery**

Develops IRS-wide risk-based contingency planning and disaster recovery capabilities to sufficiently plan or test the activities required to restore certain critical business systems and data when unexpected events occur.

## **Identity and Access Management**

Develops enterprise-wide requirements, infrastructure, and capabilities for Identity and Access Management (IdM). This includes identity proofing and registration, card issuance and maintenance, and access control via certificate authority in accordance with HSPD-12. The technical infrastructure will improve the identity management of all IRS staff, contractors with staff-like access to IRS physical and IT assets, and external partners, as well as support interoperability of the IRS' existing IdM capabilities.

## **Network Admission Control**

Allows network access policies to be applied across local area network, wireless, and Virtual Private Network (VPN) infrastructures. Ensures endpoint devices are free from threats and in compliance with IT security policies and minimum configurations before they are allowed on the IRS network. Integrates with IdM for a well-balanced and secure network.

## **IT Security Enhancements**

Includes security coding toolkits (interfaces and libraries) and a combined set of software-based security controls, which are made available to application developers for use in securing IRS business applications. Also includes Public Key Infrastructure, Enterprise Operations security tools, and IPv6 security tools.

## **Enterprise Security Compliance Enhancements**

Provides consistent security configuration management. Includes enhancements to patch and vulnerability management and a mechanism for measuring security compliance and enforcing adherence to established security policies across the enterprise.

## **Web Services Security**

Provides security based on Extensible Markup Language (XML) and Simple Object Access Protocol web technologies. The move to a SOA strategy and industry products, such as Microsoft Office 12 standardizing on XML, indicates that the IRS' use of this technology is imminent.

## **Safeguard Data Extracts**

Protects files via encryption and extended access control capabilities to facilitate access to files once user or device is authenticated and access rights are verified.

## **Incident Response Management**

Improves IRS staff and contractor capabilities to perform data discovery and risk analysis for determining the level of notification response.

## **Unauthorized Access (UNAX) Enhancements**

Enhances IRS staff capabilities to research and evaluate potential UNAX violation reports to determine whether the potential violation was inadvertent or a malicious attempt to gain access to taxpayer records.

## **Privacy Enhancing Technology and Tools (PETTS)**

Uses software programs or hardware devices to provide privacy compliance and protect PII.

## Results and Benefits

Delivering on the Security and Privacy Domain strategy will benefit the IRS by:

- Increasing the level of trust with the employees, the taxpaying community, and business partners.
- Securing “electronic storefront” communications with external entities.
- Securing data—whether mobile, shared, or stored—giving appropriate care to sensitive information handled by the IRS regardless of physical location or boundary crossed.
- Enabling a compliant, well-managed, and healthy security and privacy posture that ensures risk-based decision making and the sharing of sensitive data.
- Improving compliance with the IRS’ privacy policies and data sharing processes and other relevant federal government guidance.
- Leveraging the IT Human Capital Management Domain to enable the Service’s compliance with privacy laws, regulations, directives, and other federal mandates.

## IT Human Capital Management

### Definition

The IT Human Capital Management Domain provides consulting and support services to management on organizational change and transition planning, recruitment and hiring, succession planning, performance management, workforce planning, employee and labor management, and education and training to support effective employee development. The IRS IT workforce represents a significantly diverse demographic population that spans across management, non-management, technical, analyst, or specialist positions.

The IRS has made progress in its attempt to close the staffing gap for IT positions. There is still a need to increase the pool of highly qualified and diverse applicants for these positions. To accomplish this, the IRS will identify factors contributing to the recruitment shortages and then take action to improve recruiting sources. Additional human capital development programs will be initiated to minimize unrecoverable loss of critical institutional systems and business knowledge.

### Goals:

- Anticipate future workforce needs and required skill sets for key positions
- Baseline existing skills, experiences, and expected employment tenure
- Design an automated workforce management tool
- Establish leadership development and succession planning programs
- Improve effective employee development
- Identify and retain critical knowledge for hard-to-fill specialized positions

Figure 8: MITS Workforce Demographics



## Opportunities

IT Human Capital Management represents a significant investment and is the driving force behind all IT products and services that the IRS delivers. The IRS has identified several opportunities, including:

- Hire a significant number of technical applicants to replenish the pipeline of skilled professionals in response to attrition and the need to address changes in technology.
- Design and implement a workforce planning model to automate and precisely identify staffing imbalances expected over the coming years in order to better replenish the workforce in critical areas.
- Improve how the IRS attracts and retains the best talent through a recruitment strategy that targets highly competent and diverse professionals to reduce workload imbalances through workforce replenishment, thus ultimately improving customer and employee satisfaction and business results.
- Recruit IT-certified candidates and provide development for internal candidates to become certified based on industry standards.
- Evaluate alternative recruitment and employment options, such as accomplishing work in geographic areas with more productive sources or labor markets.

## Results and Benefits

Updating hiring plans will provide the IT organization with managers and technical professionals who possess the right skill sets to manage and execute activities and programs. Hiring to fill staffing/skill gaps will result in fewer third party contracting arrangements, increased control of IT projects by the IRS management teams, in-house knowledge transfer, lower costs, and greater compliance with standards and guidelines.

The IRS believes that identifying managerial talent through the Leadership Succession Review process and the continued administration of the leadership readiness programs will position it to meet future IT managerial opportunities.

The delivery of an IT Human Capital Management Domain strategy will benefit the IRS by:

- Maintaining workforce institutional business, systems, and IT knowledge.
- Matching the rate of change in technology with adequate staffing.
- Providing updated training and career paths for each competency-based position.
- Filling management positions and responding to future needs.
- Providing skills training for new hardware and software applications.

## Common Business Services

### Definition

The Common Business Services Domain is designed to support rapid, cost-effective delivery of similar business functionality within or across Business Domains. The scope of this domain includes identifying:

- **Business Services** – A view of a complete business transaction or interaction with key stakeholders that is delivered through the execution of common IRS business processes. Examples of a business service include processing a tax return, processing a tax law determination, or responding to a customer inquiry for information about the status of a refund.
- **Software Services** – Discrete programs that have a standards-based, platform-independent interface that enable successful performance of a business service and that can perform either business or infrastructure functions. Examples of a software service include verifying the validity of a Tax ID or Social Security Number or performing an address change. Examples of an infrastructure service include performing a security audit or a user authentication.
- **Software Components** – Reusable code that provides a function similar to, but does not fit, the more rigorous technical definition of a software service. Software components are needed when common business functionality is required separate from having access to the IRS network and software services. Examples of a software component include tax calculators and interest and penalty calculations for disconnected user applications. Creating software components that can be delivered with a disconnected user application provides the ability to support consistent calculations and functionality while still allowing for the reuse of code.
- **Commercial Off-the-Shelf (COTS) Products** – Software that provides a full set of functionality across IRS business areas. It is not always necessary to develop a software service; in many instances, the functionality is fully or partially available in a COTS product. Developing a software service as an interface to an existing COTS product, rather than developing the full functionality, can save time. Examples of COTS products include Documentum for document management and Business Objects to support business intelligence. Applying a Common Business Services approach is desirable because developers can reuse services to deliver functionality faster and more efficiently; complexity is reduced with fewer one-of-a-kind interfaces; calculations and business logic are consistently applied throughout the enterprise; and proper implementation of services reduces costs to develop and maintain systems. Candidate opportunities are identified throughout the MV&S process.

The analysis of candidate common business services evaluates each desired function and considers the:

- Feasibility of providing an enterprise solution.
- Appropriateness of providing a common solution with separate implementations.
- Business priority and benefits to justify a separate, independent solution.

The analysis also evaluates whether functionality exists within the current production environment that can be developed into a common business service to meet priority business capability needs. Specific service groupings and detailed service opportunities are developed to support the resulting business priority opportunities.

### Goals:

- Identify, develop, and deploy enterprise services to integrate business processes for improved efficiency and expanded capabilities
- Enable and support IRS SOA deployment
- Create a framework of COTS-based generic services for IRS unstructured data
- Simplify the IRS computing environment
- Simplify transition to modernized systems
- Reduce redundant functionality

## Opportunities

Below is a list of opportunities to fulfill the goals of the Common Business Services Domain:

- Engage with other strategic initiatives so Common Business Services can assist with their coordination, planning, management, and execution activities. Examples include:
  - **Modernized Portal Initiative** – Introduce a common user interface, centralized access control, and reduced operational costs. Obtain an integrated view of current production environment (CPE) and modernized systems and provide for taxpayer self-service.
  - **Broker Strategy** – Standardize system interfaces and improve application connectivity to create an agile, cost-effective integration between modernized and CPE environments.
  - **Data Strategy** – Provide standardized access mechanisms to authoritative data sources; eliminate redundant, inconsistent and outdated data; provide data design guidance to support the variety of taxpayer and submission types required by the IRS. This effort will ensure consistent and timely access to taxpayer data.
  - **Enterprise Security Activities** – Develop mechanisms and processes that provide standardization and reuse of means required to address common services security issues and fulfill the need to centralize security to meet TIGTA policy enforcement goals, while reducing the cost and increasing the consistency of security compliance.
  - **Disconnected User Activities** – Provide emulation of connected operations and define the mechanisms and processes to support disconnected operations.
- In addition to aligning the various IT initiatives, there are also other projects that present opportunities for Common Business Services. These include:
  - **Enterprise Return Retrieval Proof of Concept** – Provide the capability to access raw tax return data (in XML format) in a viewable and printable format. More information is available in the Enterprise Data section of this document.
  - **E-Authentication** – Support the new portal implementation with applications like the Internet Customer Account System and ensure compliance with the government-wide electronic authentication requirements (supports OMB FTF's E-Authentication Initiative).
  - **EDSS** – Provide a tax calculation component, not service. It is being developed in such a way that other disconnected user applications can take advantage of it, and so that it can also grow into a true service. This will lead to one calculation program to not only save the cost of developing multiple ones, but also provide consistent results across the enterprise.
- Finally, there are many opportunities to consolidate on functionality provided by various COTS products, such as document management or business intelligence.

## Results and Benefits

Expected benefits from the current approach include:

- Increased business agility.
- Integration of information from disparate sources.
- Consistent business logic across the enterprise.
- Improved utilization and retirement strategies for legacy systems.
- Improved efficiency.
- Greater interoperability.
- Life cycle savings.

## Conclusion

IT modernization has not been an easy road for the IRS — there have been significant challenges and obstacles along the way. Simultaneously modernizing the business and technology environment, while continuing to deliver successful filing seasons and compliance programs, is an extremely complex endeavor. Likewise, unraveling the interdependency among the current systems and retiring existing systems, while building modernized systems, requires a systematic and sophisticated approach to integration. The overall complexity of this challenge is growing, compounded by steadily increasing demand on tax administration services, the intricacy of tax law, and growth in the more complicated types of returns.

The IRS IT Modernization Vision & Strategy provides the overall guide for managing this massive effort. The critical elements — executive leadership, business-IT partnership, a deep commitment by a broad group of contributors, and an appropriate governance structure — have been solidly in place throughout the planning effort. This plan will guide our future IT strategy and will have a lasting and fundamental impact on the way we formulate, define, and select IT investments.

**This plan will guide our future IT strategy and have a lasting and fundamental impact on the way IT investments are formulated, defined, and selected at the IRS.**



**Internal Revenue Service**

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